TEXTILE TECHNOLOGY DIGEST

VOLUME 15 JUNE 1958 NUMBER 6

ABSTRACTS

FIBERS A

TENSILE STRESS-STRAIN PROPERTIES OF FIBERS. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. May 1958. 35 p. Bull. X-82. Free. (1992)

Stress-strain is discussed under the headings: what is stress-strain?, the stress-strain chart, how to use stress-strain properties, variables that affect stress-strain properties, and comparative stress-strain data. The data are given under the headings: fiber history, test conditions, test methods, and test equipment. 53 references.

NATURAL FIBERS A 1

VALUE-DETERMINING PHYSICAL PROPERTIES AND CHARACTERISTICS OF DOMESTIC WOOLS. E. M. Pohle and others. U.S. Agri. Mktg. Serv., Washington 25, D.C. Feb. 1958. 67 p. Mktg. research report no. 211. Order from Superintendent of Documents, Washington 25, D.C. 40¢. (1993)

This report summarizes the data gathered from the sampling, testing, and processing of 46 lots of Commodity Credit Corporation wool. Its purpose is to determine (1) accuracy of visual appraisals for classifications and shrinkages, and (2) a means of developing new wool standards which will facilitate determination of grade. Tables. Graphs. 26 references.

HOW RAIN DAMAGE AFFECTED DELTA COTTON PROPERTIES. F. L. Gerdes. Textile World 108: 51-53 (May 1958). (1994)

A comparison of fiber and spinning qualities of Mississippi Delta cotton from 1954-1957 showed that 1957 Delta cotton was badly damaged in grade and strength, but many other properties were not seriously affected. Staple and uniformity were about normal. Micronaire values were good except for late pickings. Manufacturing waste was down a little but not in proportion to grade reduction. Graphs. Table.

FURTHER SPINNING TESTS ON MICRO-SAMPLES OF COTTON. V. V. Gupte, H. Navkal, and C. Nanjundayya. Indian Cotton Growing Rev. 11: 482-489 (Oct. 1957). (1995)

Earlier work is extended to cover 14s, 20s, and 40s counts. Tables. 5 references.

RELATIONSHIP BETWEEN THE SINGLE THREAD STRENGTH AND THE CHIEF FIBER PROPERTIES. H. Navkal. Indian Cotton Growing Rev. 11: 469-481 (Oct. 1957). (1996)

The relationships existing between single-end strength and the chief fiber properties of Indian cottons are studied. The study is confined to 20s and 30s counts. Tables. 15 references.

RELATIONSHIP BETWEEN FIBRILLAR ORIENTATION DETERMINED BY X-RAY METHOD AND STRENGTH OF THE COTTON FIBER. V. Sundaram and C. Nanjundayya. Indian Cotton Growing Rev. 11: 490-495 (Oct. 1957). (1997)

This paper deals with a study of the x-ray diffraction of cottons, most of them Indian. For purposes of comparison, data are also included on three foreign cottons of the barbadense species. Graphs. Tables. 10 references.

SUPERCONTRACTION OF WOOL IRRADIATED WITH ULTRAVIOLET LIGHT OR IODINATED. A. R. Haly, M. Feughelman, and J. C. Griffith (Wool Textile Research Labs., CSIRO, Australia). (Letter to the editor). Nature 180: 1064 (Nov. 16, 1957). (1998)

COMPARATIVE STUDY OF MEASURABLE PROPERTIES OF UPLAND COTTONS GROWN IN PAKISTAN AND AMERICA. S. M. Nawaz. Pakistan Cottons 2: 1-13 (Sept. 1957). (1999)

JUTE AND MOISTURE. S. D. Chaudhuri. Pakistan Cottons 2: 14-17 (Sept. 1957). (2000)

FUNDAMENTAL APPROACH TO THE SPINNING QUALITY OF RAW COTTON. S. M. Nawaz. Pakistan Cottons 2: 18-42 (Sept. 1957). (2001)

This study was undertaken to apply to cotton the theory of J. L. Spencer-Smith (J. Textile Inst. 38: 257-272 (1947)) on estimating fiber quality. Five long staple cottons were studied in detail. Graphs. Tables. 29 references.

MANMADE FIBERS A 2

DYNAMIC MECHANICAL PROPERTIES OF NYLON 66 AND THE PLASTICIZING EFFECT OF WATER VAPOR ON NYLON. J. M. R. Quistwater and B. A. Dunell (Univ. of Brit. Columbia). J. Polymer Sci. 28: 309-318 (Mar. 1958). (2002)

RAYON AND SYNTHETIC FIBERS OF JAPAN, 1958. Japan Chem. Fibres Assoc., No. 3, 3-chome, Nihonbashi-Muromachi, Chuo-ku, Tokyo, Japan. 1958. 52 p. (2003)

This annual contains articles on Japanese manmade fibers (with fabric swatches), a table of the chemical properties of these fibers, articles on Japanese textile design, and a directory of manufacturers.

FTORLON SYNTHETIC FIBER. Z. A. Zazulina, R. N. Martsinkovskaya, and Z. A. Rogovin. Tekstil. Prom. 17, No. 5: 6-7 (1957). In Russian. Summary in BCIRA 37: 794 (1957). (2004)

The fluorine-containing polymer exhibits considerable polydispersity but contains only a small quantity (5-10%) of material with a molecular weight below 100,000. The mean molecular weight of the fiber-forming polymer ranges from 400,000-600,000. Information on fiber preparation is given, and it is claimed that the Ftorlon fiber exhibits higher strength and higher resistance to chemicals, heat, light, and mechanical stresses than any existing natural or manmade fibers.

APPROACH TO MANMADE WOOL. R. W. Moncrieff. Fibres 19: 103-107, 114 (Apr. 1958). (2005)

In this survey of the attempt to achieve wool-like qualities in synthetic fibers, it is pointed out that the properties of wool which are derived from its chemical nature can be reproduced by fibers which have a similar chemical, i.e. a protein, structure, but that they cannot be obtained from a fiber with a very dissimilar chemical structure. Tables. Photographs.

PROPERTIES OF PRELANA POLYACRYLONITRILE FIBER. M. Lorenz. Deut. Textiltech. 7, No. 9: 488-491 (1957). In German. Through BCIRA 37: 794 (1957). (2006)

Some physical properties of Prelana polyacrylonitrile fiber (produced in Premnitz by the VEB Kunstseidenwerk Friedrich Engels) are reported and compared with those of other fibers. Of special advantage are: the high resistance of the fiber to light and weather, the good elastic properties (dimensional stability, fullness, crease-recovery), the low specific gravity, and the crimp stability. The relatively low abrasion resistance and the dyeability require improvement.

TESTS ON POLYACRYLONITRILE FIBERS. E. Rockstroh. Deut. Textiltech. 7, No. 4: 336-337 (1957). In German. Through BCIRA 37: 691 (1957). (2007)

Histology, water absorption, and processing properties of commercial and special polyacrylonitriles are discussed, and diagrams are given showing changes in the thickness, air permeability, and crease-recovery angle of a woolen fabric as a function of increasing additions of polyacrylonitrile fibers from different sources.

FIBERS NOTEBOOK. PART 4. VEREL AND X-51. Fibres 19: 131-132 (Apr. 1958). (2008)

The production, processing, structure, properties, and uses of Verel acrylic fiber and X-51 copolymer fiber are given.

EFFECT OF HIGH TEMPERATURES ON SYNTHETIC FIBERS. F. Fourné. Melliand Textilber. 38, No. 10: 1180-1181 (1957). In German. Through BCIRA 37: 820 (1957). (2009)

Results obtained by the author on Perlon are compared with those reported by A. Agster (see abstr. 2201/57) to show a good agreement between the two investigations.

DEGRADATION OF MANMADE FIBERS BY HIGH ENERGY RADIATION AND HEAT. A. Sippel. Melliand Textilber. 38, No. 8: 898-904 (1957). In German. Through BCIRA 37: 689 (1957). (2010)

The stability of manmade fibers to sunlight, ultraviolet light, x-rays, and heat is discussed as a property inherent in these fibers and resulting from the catalytic action of agents such as titanium dioxide. The effect of light was examined by determining changes in the tensile strength and degree of polymerization of the fibers. The relationship between resistance to light and tendency to electrostatic charging is also discussed. 19 references.

YARN PRODUCTION B

PERFORMANCE AND PRACTICE IN FALSE TWIST CRIMPING TECHNIQUES. E. P. R. Scragg. Man-Made Textiles 34: 66-67, 70 (May 1958). (2011)

The development of the Crimp-Spin and Falspin machines is traced. Photographs.

EXPERIMENTS WITH YARN WETTING AGENTS ON COTTON YARNS. R. Kindermann and I. Gersten. Deut. Textiltech. 7, No. 7: 387-389 (1957). In German. Through BCIRA 37: 707 (1957). (2012)

The reduction of surface tension by means of wetting agents is discussed, and tests by means of a yarn-moistening machine are described for determining the efficiency of various wetting agents and the concentration to use. The results indicate that the moisture content of the yarn increases with increasing concentration of the wetting agent and the time of wetting, but not with increasing pressure, i.e. increased amount of liquid. In order to eliminate unnecessary consumption of the wetting agent, the lowest mixing ratio that still produces satisfactory results is preferably used. Since the natural wax content affects the moisture uptake of cotton, wetting tests should be carried out for each individual batch.

MODERN FLAX SPINNING PRACTICE. Textile Recorder 76: 58-60 (May 1958). (2013)

Machine developments in hackling are described, including the use of breaking and ending attachments fitted to hackling machines to eliminate hand dressing and grading subsequent to hackling. Diagrams. Table.

HIGH LABOR PRODUCTIVITY IN COTTON SPINNING WITH THE MAINTENANCE OF QUALITY. G. H. Jolly. Textile Weekly 58(1): 1161-1172, 1208-1210 (Apr. 25, 1958). Textile Merc. 138: 638-639 (Apr. 25, 1958). (2014)

Examples of methods for increasing productivity in opening, carding, combing, drawing, roving, and spinning are briefly outlined.

STUDIES IN THE FIELD OF LUBRICATION. M. Kehren, G. Lomberg, and K. Padberg. Z. ges. Textil-Ind. 59, No. 19: 813-817; No. 21: 894-897 (1957). In German. Through BCIRA 37: 797 (1957). (2015)

The effect of lubricants present on wool fibers during the steaming process is investigated by carrying out comparative tests on 9 different lubricating agents. The causes of yellowing phenomena in pure wool textiles are re-examined, and tables are given listing, for the lubricants tested, the degree of whiteness, iodine value, and "washing-out" effect (expressed in percentage residual fat) of wool fabrics exposed to light for various periods.

CLEANING AND CARDING IN COTTON SPINNING. R. Tobel. Z. ges. Textil-Ind. 59, No. 13: 499-502; No. 15: 636-638; No. 19: 791-794 (1957). In German. Through BCIRA 37: 798 (1957). (2016)

Directions are given for the correct treatment of cotton during cleaning and carding, with reference to literature data on cotton processing, the carding mechanism, the individual card components, and various factors to be taken into account in the preparation of high quality yarns.

PROBLEMS OF A SPINNING TECHNOLOGIST. S. M. Nawaz. Pakistan Cottons 1, Nos. 1 & 2: 13-23 (1956). Through BCIRA 37: 666 (1957). (2017)

The problems discussed relate to variations in crop quality, fiber faults arising in ginning preparation, troubles stemming from opening, carding, drawing, and spinning processes, and the spinning quality of cotton. 18 references.

THE NEP PROBLEM. E. Schenkel. Textil-Praxis 12, No. 7: 631-650 (1957). In German. Through BCIRA 37: 665 (1957). (2018)

This is an introductory lecture dealing with the maturity of cotton and its effect on the neppiness of yarn, delivered at the Conference of the German Textile Research Institute at Reutlingen. Other contributions to the symposium included: Immature and dead cotton from the physiological, chemical, and botanical viewpoint, by H.-P. Maier, p. 650-652; Neps and carding, by D. Kaufman, p. 652-657; Nep counting in the raw material, by F. W. Fleischle, p. 657-662; Neps, yarn evaluation, standards, by A. Wilhelm, p. 662-668; Neps in finishing, by H. Arzt, p. 668-673.

OPENING, PICKING, FIBER PREPARATION B 1

AUTOMATIC REGULATION OF PICKER LAPS BY ELECTRONIC CONTROL. Industrie Textile: 425-428 (June 1957). In French. Through BCIRA 37: 665 (1957). (2019)

The process consists essentially in allowing the stream of fibers to pass between two metal plates forming a condenser and in measuring the increase in the capacity of this condenser as compared with its value in the absence of fibers. This measurement of a variation in the capacity can be effected with excellent accuracy by the relatively simple electronic means described, based on the experimental finding that the fraction exceeding the unit of the dielectric constant of a homogeneous textile fiber/air mixture is proportional, within certain limits, to the quantity of textile fibers per unit volume.

SCALE PAN FEEDER. M. Lubig. Deut. Textiltech. 7, No. 9: 492-497 (1957). In German. Through BCIRA 37: 797 (1957). (2020)

The mechanisms of two hopper feeders (constructed by the Sachsische Maschinenfabrik) are discussed, the use of which leads to a considerable reduction of count variations.

CARDING AND COMBING B 2

SMALL-SIZE COMBING MACHINE ChMM-450. PART 1. DESCRIPTION OF THE CONSTRUCTION. E. A. Kopelevich and I. S. Shuleshko. PART 2. INDUSTRIAL TESTS. G. A. Ermilov and S. M. Belousova. Tekstil. Prom. 17, No. 7: 22-29 (1957). In Russian. Through BCIRA 37: 798 (1957). (2021)

NEP FORMATION IN WORSTED CARDING AND GILLING. E. D. Bower and P. P. Townend (Leeds Univ.). Textile Recorder 76: 61-63 (May 1958). (2022)

This article presents the results of a series of experiments designed to demonstrate the effect of fiber length on the formation of neps in carding, and the effect of fiber length, density of pinning, and the number of gilling operations prior to combing, on the nep content of slivers. Tables.

TAPE CONDENSER. PART 3. W. J. Crofts. Textile Inds. 122: 101-106 (May 1958). (2023)

In the concluding installment of this series, the author discusses the care and maintenance of the tape doffer, doffer comb, tapes and scavenger rolls, vibration problems, waste ends, static electricity, lubrication, and lighting as they affect carding quality. Photographs.

DRAWING AND ROVING B 3

DRAFTING ELEMENTS, ROLLER COVERS, AND APRONS: SYNTHETIC RUBBER WITH SURFACE ACTIVE AGENTS. M. Balkin (George Angus & Co. Ltd). Fibres 19: 115-118 (Apr. 1958). (2024)

The addition of surface active agents to the synthetic rubber gives many advantages: (1) prevents tendency for oily or greasy surface contamination of rolls, (2) prevents licking, and (3) prevents the generation of static electricity. Photographs. Diagram.

EXPERIMENTS WITH VARIOUS DRAWING FRAME ARRANGEMENTS AND THEIR EFFECT ON YARN QUALITY. E. Simon. Melliand Textilber. 38, No. 10: 1090-1092 (1957). In German. Through BCIRA 37: 798 (1957). (2025)

The single-zone principle in the second drafting passage and the two-zone principle with low preliminary draft are compared with the normal setting of the 4-roller draw-frame with classical draft distribution to show the disadvantages of the single-zone drawing mechanism and the general applicability of the two-zone principle, even on the 4-roller draw-frame. The required alteration of the draw-frame drive is very simple. The new spring-weighted drawing frames with 3-over-4 roller drafting mechanism permit further improvement of the draw-frame slivers by about 1 Uster-%.

DRAWING BY SLIPPAGE AND ITS ADVANTAGES. L. Martinez. Industrie Textile: 643-644 (Sept. 1957). In French. Through BCIRA 37: 799 (1957). (2026)

The mechanism, described and illustrated, is based on the principle of tensioning and drawing the fibrous material between two surfaces. All the working points are provided with small aprons driven with a speed increasing progressively towards the delivery end of the mechanism and, opposite to these aprons, with a tensioning plate extending over the whole length of the drawing mechanism. The arrangement makes it possible to draw slivers composed of very short fibers.

PRODUCTION OF STAPLE FIBER SLIVERS IN ONE PASSAGE. I. S. Shuleshko. Tekstil. Prom. 17, No. 5: 21-25 (1957). In Russian. Through BCIRA 37: 799 (1957). (2027)

It is shown that, when processing synthetic staple fibers, it is of advantage to increase the weight on the rollers of the draw-frame; this increases the cohesion forces between the fibers, prevents them from separating into groups in the drafting zone, and leads to reduced irregularity of the intermediate product and yarn.

CONTINUOUS SPINNING MACHINE AND FAULTS IN YARNS CAUSED BY CONTINUOUS SPINNING. F. Année. Tex 16, No. 7: 926-928, 930; No. 8: 1056-1064 (1957). In Dutch. Through BCIRA 37: 706 (1957). (2028)

Factors which adversely affect the formation of roving (division of the web by dividing tapes, the use of rubbing leathers, winding of the roving) and measures to be taken for the elimination of the faults are discussed, with special reference to type 115 and Como-Tomm web dividers (Spinnbau AG).

METALLIC CAPS WITH OPEN SQUARES FOR ROVING FRAMES. Y. S. Shapovalov and E. E. Bondarenko. Tekstil. Prom. 17, No. 3: 46-48 (1957). In Russian. Through BCIRA 37: 706 (1957). (2029)

The advantages of the arrangement described include decreased breakage frequency, increased spindle speed, increased weight of the roving, and decreased irregularity on short sections.

SPINNING, WINDING, TWISTING B 4

CASABLANCAS GX2 WITH TOP ARM WEIGHTING. Casablancas High Draft Co. Ltd. Textile Merc. 138: 723-724 (May 9, 1958). (2030)

In the GX2 system a completely new technique is used for holding, guiding, and weighting the top rolls of ring spinning frames. A new weighting arm is very small and extremely low. Photographs.

PROBLEMS IN ENLARGING THE PACKAGE SIZE IN COTTON SPINNING. A. A. Magnizkij. Textil-Praxis 12: 755-760 (Aug. 1957). (2031)

Benefits and disadvantages of increased package size are found to be related primarily to the yarn size produced. Calculations show optimum package sizes in terms of relative minimum amount of labor expended per 1,000 kg of yarn.

LIMITATION OF THE SPINNING BALLOON. J. Bayard. Industrie Textile: 645-647 (Sept. 1957). In French. Through BCIRA 37: 799 (1957). (2032)

Description is given of the balloon-reducing ring developed by the Spinnbau GmbH.

EFFECTIVENESS OF ABRIDGED SPINNING METHODS FOR STAPLE FIBER. M. N. Belitsin. Tekstil. Prom. 17, No. 2: 28-30 (1957). In Russian. Through BCIRA 37: 666 (1957). (2033)

The project of a new spinning machine is discussed, which will give cops with a yarn weight of 180 g, with a total production of 32 kg yarn.

COMING--BETTER SPINNING FRAMES. R. E. Pomeranz (Roberts Co.). Modern Textiles Mag. 39: 37-38 (May 1958). (2034)

Future trends in spinning machine design include higher spindle speeds, improvements in yarn uniformity due to higher draft and better fiber control, fewer ends down, better tension control, and bigger packages.

PRODUCTION OF TWO-PLY TWISTED YARN ON THE SPINNING MACHINE. P. K. Korikovskii. Tekstil. Prom. 17, No. 5: 19-21 (1957). In Russian. Through BCIRA 37: 799 (1957). (2035)

The method described for the production of two-ply twisted yarn combines the process of spinning one thread with the process of twisting and doubling it with a second thread wound on to a bobbin. The direction and degree of twist of the second thread and of the thread spun are usually the same. The spinning and twisting mechanism (described and illustrated) can be easily fitted on standard ring-spinning machines.

TRAVELER SELECTION. P. M. Strang. Am. Textile Reptr. 72: 57-60 (May 15, 1958). (2036)

The same factors which a mill faces in the control of end-breakage are factors which affect the selection of travelers. That the various types of travelers of the same weight differ widely as to their running positions is shown by the location of wear and the measurement of the angular displacements in horizontal and vertical planes. It is important that travelers be chosen so as to secure the minimum over-all costs of traveler and ring replacement, installation, and maintenance. Advantages gained by replacing well selected travelers at reasonable intervals will far outweigh a seeming advantage due to increased traveler life. Photograph. Diagram.

SLIVER SPINNING FRAME FOR CARPET YARNS. Platt Bros. Ltd. Textile Recorder 76: 80-81 (May 1958). (2037)

The MCS1 carpet yarn spinner is a completely new large package ring spinning machine specially designed for the production of carpet yarns. The machine is intended for spinning counts in the range 0.9s to 3s (cotton count) direct from draw frame sliver. Two rows of spindles are arranged as a front row and a back row, and the layout and appearance are on the general lines of the modern can fed cotton speed frame. Construction details are covered. Photographs.

TRAVELER CHANGING SYSTEM. C. H Ashe. Textile Inds. 122: 107-108 (May 1958). (2038)

The traveler changing file system described utilizes a card for each spinning frame on which each change of traveler is recorded to avoid needless traveler consumption.

FLANGED BOBBIN IN TWISTING. R. Struve. Z. ges. Textil-Ind. 59, No. 17: 702-707 (1957). In German. Through BCIRA 37: 707 (1957). (2039)

Problems arising in practice from the use of flanged bobbins, especially those with grooves or small upper discs, are discussed, with brief reference to various types of bobbins and their advantages and disadvantages. The behavior of various bobbins during winding-off and the resulting tension conditions are explained and the possibilities and limitations of tension control measures are pointed out.

YARNS B 5

TASLAN. Man-Made Textiles 34: 42-46 (May 1958). (2040)

In this description of the British development of Taslan, information on properties, applications, and processing is included. Photographs. Fabric swatches.

TEXTURED YARNS. J. H. Blore. Textile World 108: 60-62 (May 1958). (2041)

This brief survey includes definitions of textured, stretch, and high-bulk yarns, information on their characteristics as compared with spun and filament yarns, processing techniques, and costs. Photographs.

TEXTILES FROM ALGINATES. E. Frieser. Rayonne et Fibres Synthet. 13, No. 10: 1261-1266 (1957). In French. Through BCIRA 37: 793 (1957). (2042)

In this review, the author discusses the development, production, uses, properties, dyeing, and identification of alginate filaments. 22 references.

TECHNOLOGICAL PROGRESS IN THE MANUFACTURE OF CORDAGE. H. Muller. Deut. Textiltech. 7, No. 6: 340-343 (1957). In German. Through BCIRA 37: 666 (1957). (2043)

The present state of the technology, double-twist twisting methods, single-process twisting methods, problems of shrinkage prevention, and aftertreatment of cords from plastic synthetic fibers are discussed, with reference to new developments and their economic aspects (double-twist spindles, the Whirlwind spindle, the Fabelta direct cabler, etc.).

PROPERTIES OF VISCOSE YARN. V. A. Usenko. Tekstil. Prom. 17, No. 2: 21-26 (1957). In Russian. Through BCIRA 37: 667 (1957). (2044)

The equations given make it possible to estimate the expected yarn strength from the known physicomechanical properties of the fiber, or from the breaking length given or stipulated by the technological conditions, so as to produce yarn with the required properties. These equations can also be used in process control.

METALLIC YARN ADVANCES. Am. Textile Reptr. 72: 43-47, 64-65 (May 15, 1958). (2045)

Details of developments and new uses of metallic yarns, as exemplified by Lurex and Metlon, are given.

FRICTION OF A YARN LAPPING A CYLINDER. C. Rubenstein. J. Textile Inst. 49: T181-T191 (Apr. 1958). (2046)

The frictional behavior of all textile materials may not conform with Amontons' law (which states that the frictional force is directly proportional to the normal load). The variation of the frictional force with the normal load has been shown to be closely represented by a power law involving 2 constants. By means of this power law, the relation between the on-going and off-going tensions in a yarn as it traverses a cylindrical peg is evolved.

FABRIC PRODUCTION C

WARPING, SLASHING, YARN PREPARATION C 1

CORN STARCH. 2d ed. Corn Inds. Research Found., Inc., 1001 Connecticut Ave., N. W., Washington 6, D. C. 1958. 44 p. Free. (2047)

Starch is discussed under the headings: what is starch?, how corn starch is made, types of corn starch, handling of starches, and analytical examination of corn starch. Glossary.

WINDING STUDY. C. Willemarck. Ann. Sci. Textiles Belges No. 2: 68-83 (June 1957). In French. Through BCIRA 37: 709 (1957). (2048)

The importance of determining the number of yarn breakages during the winding process is pointed out, with special reference to the method based on the Poisson distribution. A comparative study is made between the experimental and the Poisson distribution.

JUTE SIZING. D. De Meulemeester, G. Raes, P. Verbeeck, and L. Vandenhove. Ann. Sci. Textiles Belges No. 2: 24-54 (June 1957). In French. Through BCIRA 37: 710 (1957). (2049)

An industrial sizing experiment with six different size mixings (farina, alginate, carob flour, maize, soluble starches, talc, sulfonated oils, etc.) applied at various concentrations is described. The results are summarized.

CONTINUOUS ELONGATION MEASUREMENT ON WARP THREADS. S. Deli. Textil-Praxis 12, No. 7: 684-685 (1957). In German. Through BCIRA 37: 672 (1957). (2050)

The Lambdograph measures by electrical means changes in the warp elongation during sizing as a result of warp-beam braking, squeezing pressure, velocity of the thread, etc., and also indicates immediately any differences in the peripheral speed of the control rollers at both ends of the sizing machine. Elongations ranging from 0-10% can be read off the recorded diagram with an accuracy of 0.1%.

STRETCHING VISCOSE RAYON WARPS DURING SIZING. E. A. Bubnova. Tekstil. Prom. 17, No. 7: 33-36 (1957). In Russian. Through BCIRA 37: 804 (1957). (2051)

The experiments described were carried out (on yarns with low orientation and an elongation of 20-22% and on strengthened yarn with an elongation of 15-16%) to study the optimum conditions for sizing medium-denier viscose rayon yarn spun by the centrifugal method. The yarns were stretched during sizing by 1, 3, 5, 7, and 10%, and it was found that the fabrics produced from the yarn showed highest dimensional stability, crease resistance, low shrinkage after repeated washing, and good drapeability, if the degree of stretching did not exceed the optimum range (5-5.0% for an elongation of 20-22%; 2.5% for an elongation of 15-16%; 3.5-4% for an elongation of 17%), depending upon the structural properties of the fiber and its absolute elongation resulting from swelling during sizing.

SIZING IN A STEAM ATMOSPHERE. S. Chantel. Industrie Textile: 443-444 (June 1957). In French. Through BCIRA 37: 671 (1957). (2052)

The process described consists in allowing the sizing rollers to operate in an atmosphere of saturated or superheated steam (according to the application and sizing agents used). The upper roller consists of a wooden or metal cylinder coated with solidified gelatine, dextrin, synthetic resin, or another water-soluble plastic material to which suitable products and, in particular, dyes may be added. In contact with the steam, this coating dissolves and is progressively deposited on the warp. The process is also suitable for applying finishes to fabrics. If both sides of the fabrics are to be treated, the bottom roller can be constructed similarly to the top roller and a second steam source provided below the fabric.

RAPIDO NST SIZING AGENT. Industrie Textile: 444-446 (June 1957). In French. Through BCIRA 37: 671 (1957). (2053)

This sizing agent, manufactured by a chemical process from plant cellulose as the main raw material, is particularly suitable for cotton and viscose rayon. It is available as a yellowish water-soluble powder, which swells on boiling and gives a clear homogeneous solution of high sizing power. It can be mixed with other sizing agents (starch, dextrin, etc.) and stored indefinitely. Advantages of this new product and sizing compositions containing it are given.

UNIVERSAL MOISTURE REGULATOR FOR COTTON WARPS. A. V. Avmochkin. Tekstil. Prom. 17, No. 7: 43-46 (1957). In Russian. Through BCIRA 37: 804 (1957). (2054)

The mechanism of the device for mounting on sizing machines is described and a circuit diagram is given. Laboratory and plant-scale experiments gave satisfactory results.

ROP CHEESE WINDING MACHINES. Melliand Textilber. 38, No. 8: 871-874 (1957). In German. Through BCIRA 37: 670 (1957). (2055)

Two types of cheese winding machines are described: cheese winders with grooved rollers for the production of super-cones, and those for winding cylindrical and conical bobbins.

AUTOMATIC HIGH EFFICIENCY WINDING MACHINE. J. Baldi. Melliand Textilber. 38, No. 7: 754-757; No. 8: 867-870 (1957). In German. Through BCIRA 37: 670 (1957). (2056)

Constructional details are described of the new high speed winding machine, developed by the Soc. Alsacienne de Constructions Mecaniques. Nomograms and equations are given for calculating the efficiency of the machine.

THREAD SLIPPING DURING WINDING. H. Jehle. Melliand Textilber. 38, No. 8: 870-871 (1957). In German. Through BCIRA 37: 671 (1957). (2057)

During high speed winding, slipping of the wound thread occurs which is attributed to the shape of the balloon. A single balloon promotes the slipping of windings which does not occur with a multiple balloon. The Schlafhorst winding accelerator, which operates on the principle of converting the single into a multiple balloon, is pointed out as effective means for the prevention of layer slipping.

EFFECT OF REVERSIBLE CORIOLIS' INERTIA FORCES ON YARN REWINDING. S. T. Goritskii. Tekstil. Prom. 17, No. 2: 30-33 (1957). In Russian. Through BCIRA 37: 671 (1957). (2058)

It is shown that, as a result of the reversible Coriolis' inertia forces, unwinding of the yarn from conical package surfaces is facilitated, the firmness of the yarn layers increases (reducing thereby the possibility of sliding), and the conditions for the passage of the thread in the thread guides are improved.

THEORETICAL CALCULATION OF THE RUNNING TIME OF WARPING MACHINES. H. Staude. Deut. Textiltech. 7, No. 9: 502-503 (1957). In German. Through BCIRA 37: 803 (1957). (2059)

The possibility of determining the machine speed by an experimental method is discussed and an equation is derived, by means of which it is possible to calculate the running time of the machine for a given warp length.

CONTROLLED WINDING OF A SHEET OF THREADS. P. Catuard. Industrie Textile: 653-654 (Sept. 1957). In French. Through BCIRA 37: 803 (1957). (2060)

The installation described for regulating the winding speed of warps consists of a dc motor with a series of inductors, a generator with three separate windings, and control means for varying individually the flux produced by the windings. A circuit diagram is given.

IMPROVED YARN TENSION CONTROL IN WARPING. Modern Textiles Mag. 39: 44, 46 (May 1958). (2061)

The use of the Lindly Electrotense results in substantial labor savings, smoother, more evenly wound warp beams, and increased yardages per beam. The design of the Electrotense is described and future additional uses are cited. Photographs.

ELECTRONIC STOP MOTION FOR WARPING MACHINES. V. G. Leshchenko and I. I. Spiridinov. Tekstil. Prom. 17, No. 2: 35-36 (1957). In Russian. Through BCIRA 37: 671 (1957). (2062)

The introduction of thyratrons and of a new type of hooks for automatic knocking-off motions reduces the stopping time for warping machines to one-third.

WEAVING C 2

SELF-ADJUSTABLE LETOFF MOTIONS. F. Steinert. Z. ges. Textil-Ind. 59, No. 21: 889-892 (1957). In German. Through BCIRA 37: 805 (1957). (2063)

Two groups of self-adjusting letoff motions are critically examined: (1) in which the braking force itself is controlled by the decreasing warp-beam diameter, and (2) in which the braking force is affected by the increasing and decreasing warp-thread tension. The disadvantages of both systems are claimed to be eliminated in the self-adjusting compensation letoff motion KB6 (Fritz Hulvershorn) the mechanism of which is described.

DETECTORS FOR MECHANICAL AND ELECTRICAL WARP STOP MOTIONS. German Standards Comm. Melliand Textilber. 38, No. 10: 1132-1134 (1957). In German. Through BCIRA 37: 805 (1957). (2064)

The two drafts of the specification DIN 64 608 are a further development of the same specification issued in 1954. Sheet 1, based on a Swiss proposal, contains the specifications for open and closed detectors for mechanical, and open detectors for electrical warp stop motions; sheet 2 contains forms of detectors which do not correspond to the ISO-recommendations but are, at present, indispensable. Sheet 1 has been submitted to the ISO-Committee as a counter-proposal to the first draft of the ISO-recommendation.

MAXBO SHUTTLELESS LOOM. Textile Merc. 138: 720-722 (May 9, 1958). (2065)

The outstanding feature of the loom is its pneumatic picking motion. The weft is presented in measured picks to a blowing nozzle, shot through the shed by a sharp blast of air, and then cut at both selvages. The complete picking sequence and other features are described. Photographs. Diagram.

CZECH ELITEX SINGLE-SHUTTLE AUTOMATIC LOOM. Skinner's Silk & Rayon Record 32: 500-501 (May 1958). (2066)

This single shuttle automatic loom for simple cotton and spun rayon fabrics is available in three reed widths of 1.2, 1.4, and 1.6 m (47, 55 and 63 in.). The looms are capable of a wide range of speeds, enabling the optimum value to be selected for a particular fabric. Special features are briefly described. Diagrams. Graphs. Photographs.

QUALITY CONTROL IN WEAVING. H. W. Griffith. Textile Merc. 138: 651, 653 (Apr. 25, 1958). (2067)

The use of the Shirley Development Ltd stiffness tester, line gratings, yarn crimp and friction testers, loom gauges, and weft unwinding tension meter in weaving quality control is described.

ILLUMINATED WEAVE BOARD. H. Kern and A. Kern. Textil-Praxis 12, No. 8: 779 (1957). In German. Through BCIRA 37: 673 (1957). (2068)

The board contains 400 squares provided with bulbs, which can be separately illuminated by operating 400 switches, to demonstrate and explain weave types for educational purposes.

HIGH PRODUCTIVITY IN WEAVING WITH THE MAINTENANCE OF QUALITY. J. H. Spencer. Textile Weekly 58(1): 1157-1158 (Apr. 25, 1958). Textile Merc. 138: 639-641 (Apr. 25, 1958). (2069)

The factors influencing productivity in weaving are briefly discussed, and figures are given to show the productivity of various weaving systems and their ancillary processes.

DEVICE FOR COUNTING THE REED DENTS. J. Bouillard. Industrie Textile: 585-586 (Aug. 1957). In French. Through BCIRA 37: 710 (1957). (2070)

WEAVING OF TERRY TOWEL FABRICS. PART 2. H. Barlow. Textile Recorder 76: 64-65 (May 1958). (2071)

Shuttle box motions are discussed. Diagrams.

WARP TENSION DURING WEAVING. C. Duverger. Industrie Textile: 527-530 (July 1957). In French. Through BCIRA 37: 672 (1957). (2072)

The methods described for measuring the ratio of shed tension and warp tension and, consequently, for evaluating the warp relaxation, are based on determining the movements of the cloth fell by means of a mechanical or electronic feeler. The device and its mechanism are described.

DEVELOPMENT OF THE WEFT FEELER ON MECHANICAL LOOMS. R. Hünlich. Deut. Textiltech. 7, No. 9: 499-501 (1957). In German. Through BCIRA 37: 805 (1957). (2073)

Development and mechanism of weft feelers, based on mechanical, electromechanical, electro-optical, and photoelectric principles, and their advantages and disadvantages are discussed. Directions are also given for mounting and use of these installations.

ELEMENTS AND UNITS FOR SHED FORMATION. J. Schneider. Z. ges. Textil-Ind. 59, No. 17: 707-711; No. 19: 803-807; No. 20: 854-857; No. 22: 930-936 (1957). In German. Through BCIRA 37: 805 (1957). (2074)

Various types and constructions of dobbies are described and illustrated.

SHED FORMATION DURING THE WEAVING PROCESS AND THE RESPECTIVE AUXILIARY MACHINES. H. Steinmüller. Melliand Textilber. 38, No. 10: 1118-1121 (1957). In German. Through BCIRA 37: 804 (1957). (2075)

Modern shedding motions, and their constructional characteristics and mechanisms are discussed, with special reference to jacquard machines.

NOMOGRAPHS IN THE WEAVING MILL. A. Besser. Deut. Textiltech. 7, No. 6: 347-349 (1957). In German. Through BCIRA 37: 673 (1957). (2076)

Examples are given to show the advantages of graphical calculation, on the basis of nomograms and tables, in determining the speed of the loom, the width of the finished fabric, the productivity of the loom, the weft density, etc.

USE OF MANMADE FIBERS IN HARNESS MAKING. H. Nauen. Melliand Textilber. 38, No. 10: 1122-1123 (1957). In German. Through BCIRA 37: 805 (1957). (2077)

The advantages and disadvantages of manmade fibers in harness cords are discussed.

WEFT BOBBIN FEELER. M. Grayen. Industrie Textile: 461-463 (June 1957). In French. Through BCIRA 37: 672 (1957). (2078)

The mechanism described operates by a current of air and an electrical contact with an electromagnet which stops the loom.

ABRASION RESISTANCE OF ACRYLONITRILE FILAMENTS DURING WEAVING. W. Kleinert. Deut. Textiltech. 7, No. 6: 336-337 (1957). In German. Through BCIRA 37: 672 (1957). (2079)

The abrasion resistance of unsized warp threads from polyacrylonitrile fibers is discussed. Examination of the abrading effect of shaft and reed during weaving does not lead to any appreciable deformation to promote the pilling effect.

HIGH PRODUCTIVITY LOOMS FOR LOOPED, CURLED, OR CUT VELVETS. A. Gausset. Industrie Textile: 655-656 (Sept. 1957). In French. Through BCIRA 37: 804 (1957). (2080)

The new device and process described, according to which the pile formation takes place independently of the ground weave, can be used in the production of moquette or velvet by double-weft binding on a loom with two shuttles. The production is claimed to be increased by up to 100%.

REFORMER WEAVES: DEVELOPMENT AND PRACTICAL APPLICATION. S. Bauch. Deut. Textiltech. 7, No. 6: 349-354 (1957). In German. Through BCIRA 37: 673 (1957). (2081)

General structure of a reformer (bull-hide) weave, binding-point ratio, development of reformer weaves, uses, pattern and setting peculiarities, warp-shrinkage, and designing of the fabric are discussed.

KNITTING C 3

STROBOSCOPIC DEVICES IN KNITTING AND ALLIED OPERATIONS. K. Mamnicki. Hosiery Trade J. 65: 77-78, 84 (May 1958). (2082)

The use of stroboscopes in textile mills has increased as quality control and production control requirements have become more and more stringent. Instances where stroboscopic devices are of use are noted. The operation, construction, and application of the Briggs BRRA Speedotex, Ashdown Rotoscope, and the Swedish Filoskynkometer are discussed, and compared with the HATRA yarn speed meter.

FIXING PICOT MENDERS. W. D. Frye. Textile Inds. 122: 139-141 (May 1958). (2083)

Pointers on the setting and maintenance of the picot bar are given. Photographs.

DESIGN POSSIBILITIES IN RACKED RIB FABRICS. J. B. Lancashire. Hosiery Trade J. 65: 66-69 (May 1958). (2084)

YARN SPEED INDICATOR. Smiths Industrial Instr. Div. Textile Weekly 58(1): 1206 (Apr. 25, 1958). (2085)

The indicator works on the magnetic principle for the accurate measurement of wool, cotton, or manmade fibers on revolving cylinder type knitting machines to ensure that the same quality knitwear is maintained on a number of machines.

APPLICATION OF WORK STUDY TO THE FF HOSIERY INDUSTRY. C. Stevenson (English Rose Ltd). Hosiery Trade J. 65: 96-97 (May 1958). (2086)

The importance of work study in increasing efficiency is stressed, using as an example the application of such a study to the operations in a hosiery finishing department.

FAULTS IN WARP KNITTED FABRICS. PART 3. KNITTING ELEMENTS AND MECHANICAL DEFECTS. Hosiery Trade J. 65: 88-90 (May 1958). (2087)

Faults in warp knitted fabrics due to wear, breakages, or deficiencies in the knitting elements themselves, or caused by bad alignment, incorrect setting, or incorrect timing are discussed.

RELATIONSHIP OF LOOP SHAPE TO DIMENSIONAL CHANGE IN LAUNDERING OF PLAIN KNIT COTTON T-SHIRTS. S. H. Roberts and H. M. Fletcher (U.S. Agri. Research Serv.). J. Home Econ. 50: 355-358 (May 1958). (2088)

A study was made of the effects of laundering on 33 different brands of plain knit cotton T-shirts. These garments were washed in an automatic washer by a standard procedure and dried by 2 methods, screen and tumbler. Based on the results of this study, it may be concluded that, in buying plain knit cotton garments which will be dimensionally stable in laundering, it is important to select those in which the knitted loops are round or slightly wider than they are long; that is, those which have more courses per in. than wales per in. 3 references.

FABRICS C 4

LATEX BACKINGS FOR FURNISHING FABRICS. H. J. Northeart (Dunlop Rubber Co. Ltd). Skinner's Silk & Rayon Record 32: 511-512 (May 1958). (2089)

The advantages of rubber backings, methods of application, choice of thickening agent, and choice of natural or synthetic rubbers are briefly discussed.

WOVEN FABRIC STRUCTURE: SPOT PATTERNS WITH EXTRA WARP OR WEFT. D. C. Snowden. Man-Made Textiles 34: 59 (May 1958). (2090)

DESIGN IN WOVEN STRUCTURE. PART 64. DESIGNS COMBINING WARP AND WEFT PREDOMINANT WEAVES. D. C. Snowden. Wool Rev. 31: 32-33 (Apr. 1958). (2091)

METALIZED TEXTILE DEVELOPMENTS IN GERMANY. Skinner's Silk & Rayon Record 32: 514-515 (May 1958). (2092)

Following a brief description of metalization methods and equipment, a comparison is made of the relative properties of two fabrics coated in different ways: one coated with a metal sprayed on and bound by a synthetic resin and the other metalized in high vacuum. Potential applications of the fabrics are also noted.

FIRE ACCIDENTS: THE CONTRIBUTION OF SOME TEXTILES. D. I. Lawson. Research 11: 126-133 (Apr. 1958). (2093)

The inflammability of apparel and household textiles makes an important contribution to accidents in the home. The rate of flame spread over fabrics is a reliable indication of the burning hazard and work is still proceeding to ascertain if there is any correlation between the severity of burns and the time taken by any fabric to burn 100 in. vertically. Graphs. 15 references.

HOMEMAKERS APPRAISE FIBERS FOR SELECTED ITEMS OF HOUSEHOLD FURNISHINGS. D. B. Levine. U. S. Agri. Mktg. Serv., Washington 25, D. C. Jan. 1958. 14 p. (2094)

This preliminary report of an extensive study provides some of the major findings relating to homemakers' ownership of and attitudes toward the different fibers used in selected items of household furnishings. The items studied include living room draperies, soft floor coverings in living room and master bedroom, bedspreads, blankets, and table coverings. The survey, for the most part, was limited to items that had been used in the last year. Tables.

FABRICS AND FIBERS FOR PASSENGER CARS: AUTOMOBILE MANUFACTURERS' VIEWS, 1955 COMPARED WITH 1950. M. Jacobs. U. S. Agri. Mktg. Serv., Washington 25, D. C. Apr. 1957. 53 p. Mktg. research report no. 152. Order from Superintendent of Documents, Washington 25, D. C. 30¢. (2095)

This report summarizes some of the major shifts in consumption of materials, especially fabrics and fibers, used in passenger cars between 1950 and 1955 as well as key opinions and attitudes of automobile manufacturers relating to the future use of these materials. Tables.

LAMBSKIN-LIKE FABRICS. H. Walter. Textil-Praxis (English ed.) No. 1: 19-21 (Mar. 1958). (2096)

Methods of attaining a lambskin-type fabric on the velvet loom are described. Diagrams.

NONWOVENS UP TO DATE. M. T. Hoffman. Textile Inds. 122: 83-91 (May 1958). (2097)

In this analysis of the impact of nonwoven fabrics on the textile industry, the author points out that principally the felt trade has been adversely affected. In addition, nonwovens have made inroads into certain woven fabric markets, e.g. filters and linings. The future of nonwovens in the apparel field will depend largely on how well the industry can solve the problems of drape, dyeing, printing, hand, and other qualities in which nonwovens do not compare favorably with woven fabrics.

POLYTHENE TEXTILE FUTURE. Man-Made Textiles 34: 60-61 (May 1958). (2098)

The properties of Courlene which have made it suitable for use in fusible interlinings, electrical insulation, filtration, surgery, and fishing, as well as some potential developments, are outlined. Photographs.

PHYSIOLOGICAL PROPERTIES OF MIXED TEXTILES. O. Mecheels, M. Nopitsch, A. Kling, and J. Mecheels. Melliand Textilber. 38, No. 9: 1017-1023; No. 10: 1144-1151 (1957). In German. Through BCIRA 37: 824 (1957). (2099)

Results obtained from tests carried out by measuring the heat-transmission, perspiration transport, and electrostatic charge of textiles are discussed and physiological properties of textiles from natural/synthetic fiber blends are reviewed. Biological tests on these fiber blends are also reported. As regards hygienic and physiological aspects it was found that, with the exception of pure wool, fiber mixtures are better tolerated by the human body than textiles containing only one fiber type. An attempt is also made to elucidate the relationships between the type of blend and susceptibility to mold and rot attack.

AVOIDING SECONDS IN WEAVING. G. Williams. Textile Inds. 122: 112-113 (May 1958). (2100)

The trouble shooting system used by a veteran weaver is briefly described.

FINISHING AND CHEMICAL PROCESSING D

HEAT SETTING MANMADE FIBERS. F. Fourné. Textil-Praxis 12, No. 8: 797-804 (1957). In German. Through BCIRA 37: 680 (1957). (2101)

Theoretical principles of thermal setting are discussed, with reference to the use of saturated steam, infrared radiation, and convection heat.

CONTINUOUS PRETREATMENT AND DYEING METHODS FOR CHEMICAL FIBERS. H. U. Schmidlin. Z. ges. Textil-Ind. 59, No. 19: 817-822; No. 20: 863-865 (1957). In German. Through BCIRA 37: 810 (1957). (2102)

Continuous open-width scouring and bleaching processes and installations are reviewed and dyeing methods (Thermosol process, pad-steam process, and semicontinuous and continuous dyeing of fiber mixtures) are discussed.

DYEING AND FINISHING OF POLYESTERS. D. J. E. Nijkamp. Rayonne et Fibres Synthet. 13, No. 9: 1115-1121; No. 10: 1239-1247 (1957). In French. Through BCIRA 37: 810 (1957). (2103)

In this survey, the author discusses general characteristics and uses of polyester fibers and describes dyeing methods (carrier dyeing, high-temperature dyeing, dyeing of polyester/wool and polyester/cellulose fabrics) and finishing processes (stabilization, brushing and shearing, singeing, decating and ironing, and permanent pleating).

CHEMICAL PROCESSES D 1

PROBLEMS IN BLEACHING COTTON PIECE GOODS. Textile Recorder 76: 70-72 (May 1958). (2104)

Knowledge of the sources of color in raw cotton and of the dyes used in colored piece goods, as they are related to such influences as alkali boiling and oxidation, is of great importance in dealing with special bleaching problems. Some guidance on these and other important points is offered in this literature and patent review. 9 references.

OPEN-WIDTH BLEACHING. S. Wirth. Melliand Textilber. 38, No. 10: 1151-1152 (1957). In German. Through BCIRA 37: 807 (1957). (2105)

The method described consists in a semi-continuous pretreatment of certain cotton or spun-rayon articles, for which no 100% whiteness or complete desizing is required, with 20 g/l sodium peroxide, 80 g/l waterglass, 20 g/l potassium persulfate, 20 g/l soda, and 10 g/l Dionil ND or Kiralon B (boiling-off agent). The treatment can be carried out on the simple and inexpensive modified pad-roll installation of the Karl Menzel Maschinenfabrik Windelsbleiche. It is recommended that the cloth should be tested after the first pretreatment experiments for loss in tensile strength and decrease in degree of polymerization, and the concentrations of the bleaching bath components adjusted accordingly (especially in the case of spun rayon).

AVESTA-KARRER HIGH CONCENTRATION BLEACHING SYSTEM. P. G. Mellgren. Melliand Textilber. 38, No. 8: 911-917 (1957). In German. Through BCIRA 37: 677 (1957). (2106)

The process described, based on the same principle as the continuous peroxide and continuous chlorite bleaching processes, is suitable for yarn and loose material from cotton, rayon, flax, wool, and manmade fibers. It consists of the following stages: vacuum impregnation, water extraction to a liquor ratio 1:1, heating, storing, and rinsing. The main advantages comprise: rapid bleaching in a single stationary operation; the possibility of carrying out alternately peroxide and chlorite bleaching by using the same (stainless steel) equipment; small consumption of chemicals; simple operation; high tensile strength, elasticity, and degree of polymerization of the treated material; uniform whiteness, absorbability, and appearance; reduced weight loss (only about 3% in normal cotton yarn); insignificant steam and reduced water consumption.

WHAT MAKES GOOD MERCERIZING? R. W. Pinault. Textile World 108: 69-73 (May 1958). (2107)

The most important factors in the production of trouble-free mercerized cotton are the maintenance of proper caustic strength, sufficient dwell time, right pad-tenter ratio, and efficient afterwashing.

POLYETHYLENE IN TEXTILE FINISHING. Allied Chem. Co. Am. Textile Reptr. 72: 19-21 (May 15, 1958). (2108)

A-C polyethylene 629 is an emulsifiable plastic. A typical procedure for preparing nonionic emulsions is given, and its application, cost, and advantages are described.

OPEN-WIDTH BLEACHING WITH SODIUM CHLORITE IN COTTON FINISHING. PART 2. R. Petermann and H. Fritsch. Deut. Textiltech. 7, No. 9: 515-517 (1957). In German. Through BCIRA 37: 808 (1957). (2109)

The aftertreatment of chlorite-bleached cloth with hydrogen peroxide to improve its whiteness, the use of optical bleaching agents, changes in the liquor concentration and their effect on the bleaching effect, the effect of residual sodium chlorite on the cloth, mechanical and technological properties of the bleached fabric, the economical advantages of sodium chlorite bleaching, and safety measures in sodium chlorite bleaching are discussed. For part 1 see abstr. 3580/57.

HYDROGEN PEROXIDE BLEACHING. V. I. Shevchenko. Tekstil. Prom. 17, No. 2: 62-63 (1956). In Russian. Summary in BCIRA 37: 677 (1957). (2110)

Recommendations for scouring and bleaching yarns and fabrics by means of hydrogen peroxide are given.

HISTORICAL NOTES. PART 15. A FRENCHMAN NAMED O'REILLY: MODERN BLEACHING--150 YEARS AGO. S. M. Edelstein (Dexter Chem. Corp.). Am. Dyestuff Reptr. 47: 253-257 (Apr. 21, 1958). (2111)

EFFECT OF CREASEPROOFING ON CREASE RECOVERY. W. Wegener. Melliand Textilber. 37, No. 10: 1096-1102 (1957). In German. Through BCIRA 37: 813 (1957). (2112)

The crease recovery behavior and abrasion resistance of one untreated and three creaseproofed viscose rayon fabrics were examined. The tests were made in warp and weft direction by determining the crease recovery angle as a function of time, position of the crease, and Knittex (finishing agent) concentration. The results are discussed and presented in diagrams.

INFRARED CONDENSATION OF RESINS DURING CREASEPROOFING. W. Vauck. Deut. Textiltech. 7, No. 9: 518-522 (1957). In German. Through BCIRA 37: 813 (1957). (2113)

Infrared condensation of urea- and melamine-formaldehyde resins in the presence of various inorganic catalysts is discussed, with reference to light and dark radiators. In the case of dark radiation, the condensation process proceeds more rapidly and depends upon the type of catalyst used, whereas in the case of light radiation the catalysts have approximately the same effect. The higher condensation losses in dark-radiation installations, at the same temperature and duration, are due to the radiation absorption of the resins in the region of 3μ.

GRAYING OF FABRICS IN LAUNDERING. E. Albinson. Textile Recorder 76: 68 (May 1958). (2114)

It is shown that the continued use of synthetic detergents in the home laundry, even in moderately soft water, causes an accumulation of calcium ions. When these fabrics are subsequently commercially laundered, the soaps used cause the calcium to precipitate out. To avoid this it is recommended that commercial launderers consider incorporating either polyphosphates or sodium metaphosphate or tetrasodium pyrophosphates as a standard component of their detergent mixtures.

SWELLING AND CAVITY FORMATION IN SECONDARY CELLULOSE ACETATE. PART 1. THE MECHANISM OF CAVITY FORMATION. PART 2. THE EFFECT OF SURFACE-ACTIVE AGENTS AND SALTS. R. Jeffries (Brit. Rayon Research Assoc.). J. Textile Inst. 49: T192-T222 (Apr. 1958). (2115)

Fabrics containing secondary cellulose acetate are delustered commercially by treatment in hot aqueous solutions, which produce within the filaments minute liquid-filled cavities. These cavities, which extend throughout the filament, empty, but do not collapse, during the drying of the filament and therefore reduce the luster of the fabric by scattering the incident light. The aim of this work is to gain more knowledge of the various physical changes in the acetate during these delustering treatments. This paper deals with the swelling and the formation of the cavities. Part 1 gives an account of a study of the swelling and solution of secondary cellulose acetate in relation to cavity formation, and discusses mechanisms for the latter; Part 2 describes work on subsidiary aspects of the problem, i.e. the effects of surface active agents and inorganic salts on the swelling and cavity formation. Tables. Graphs. 27 references.

DESIZING EVALUATION. F. J. Di Carlo, R. J. Coleman, and C. Odorkiewicz (Fleischmann Labs.). Textile Inds. 122: 98-100 (May 1958). (2116)

A laboratory method for obtaining comparative data on the value of different enzyme preparations and wetting agents used in desizing, as well as for determining the effect of temperature, enzyme concentration, and pH on the efficiency of desizing, is described. Some of the data and relationships developed by its application are included. Table. Graphs. Photographs. 6 references.

PROTECTION OF POLYAMIDE FIBERS AGAINST PEROXIDE. K. Dithmar and E. Naujoks. Melliand Textilber. 38, No. 8: 904-912 (1957). In German. Through BCIRA 37: 681 (1957). (2117)

Preliminary experiments showed that hydrogen peroxide does not attack polyamide fibers in the presence of acids or their salts. Investigations into the protective action of alkaline compounds led to the development of nitrogen bases or their salts and derivatives, with activity-promoting substituents in the chain which exhibit their action in the bleaching bath, on the fiber surface, and in the fiber. The new Proventin method (Degussa AG) is described and the use of these agents (of which about 300 were examined) in impregnating polyamide fibers against future peroxide attack is pointed out.

EFFECT OF TEXTILE ASSISTANTS ON DIRT ABSORPTION OF PERLON FABRICS. A. Wicklein. Faserforsch. u. Textiltech. 8, No. 6: 230-239 (1957). In German. Through BCIRA 37: 680 (1957). (2118)

About 100 different textile assistants with antistatic properties, and finishing agents, were tested for their soil-repellent and whiteness-improving properties, by using a method of the tumbler-test type for determining the soilability of the fabrics with dry pigment soil, and evaluating the degree of grayness by optical measurements and the amount of soil absorbed by gravimetric ash determination. The results showed that it is possible to improve the soil repellent properties of Perlon fabrics by the use of suitable brightening and finishing agents.

PREVENTION OF WOOL FABRIC SHRINKAGE WITH POLYAMIDE-EPOXIDE RESIN FINISHES. C. E. Pardo and R. A. O'Connell (Western Regional Research Lab.). Am. Dyestuff Reptr. 47: P333-P338 (May 19, 1958). (2119)

This paper describes the preparation, application, and curing of polyamide-epoxide resins on a wool flannel fabric to control its shrinkage during laundering. Excellent shrinkage protection is obtained with aqueous resin dispersions containing between 30-70 parts by weight of either the polyamide or epoxide resin component at uptake levels of 3.5-4%. The degree of shrinkage resistance is related to the development of fabric rigidity which, in turn, is governed by the relative proportions of resins in the formulation, amount deposited on the fabric, and the curing conditions employed. Graphs. Tables. 23 references.

FINISHING CIRCULAR TRICOT CLOTH. Melliand Textilber. 38, No. 8: 925-926 (1957). In German. Through BCIRA 37: 680 (1957). (2120)

Wet lapping of the centrifuged cloth before drying is recommended to remove creases due to wet treatment and to even out the mesh.

NEW ROTPROOFING COMPOSITIONS. A. B. Kogan. Tekstil. Prom. 17, No. 3: 39-40 (1957). In Russian. Through BCIRA 37: 721 (1957). (2121)

The use of trivalent chromium salts as rotproofing agents for cotton is discussed.

BEHAVIOR OF AMINOPLASTS IN TEXTILES. E. Elöd and G. Kistner. Z. ges. Textil-Ind. 59, No. 19: 808-811 (1957). In German. Through BCIRA 37: 813 (1957). (2122)

The aminoplasts used in textile finishing are not water-insoluble and, according to the temperature of the wash liquor, they dissolve to a greater or lesser extent, most of them being removed in the first washing process. This is due mainly to the presence of catalysts. Dissolving of further amounts of aminoplasts during subsequent washing, even after removal of most of the catalysts, is due to their hydrolytic cleavage. The development of unpleasant formaldehyde odor is associated with the hydrolytic decomposition of the aminoplasts during storage rather than with the presence of free aldehyde. This gradual decomposition, which is enhanced by increasing humidity and the presence of catalysts on the fabric, cannot be eliminated.

EVOLUTION IN FINISHING TECHNIQUES. PART 1. MACHINES FOR APPLYING FINISHING MATERIALS. F. Wood. Man-Made Textiles 34: 62-63 (May 1958). (2123)

Application of the mixing to the fabric, according to the material and particular end-use, may be on the back-fill, combined back-fill, and pad mangle, or on the pad mangle. These, and the spray damper, steaming box, and belt stretcher for conditioning the cloth are briefly described. Diagrams.

DYEING AND PRINTING D 2

LOSS OF STRENGTH IN COTTON FABRICS DYED WITH SULFUR BLACK DYE. N. D. Mal'tsev and O. I. Aganova. Tekstil. Prom. 17, No. 7: 37-40 (1957). In Russian. Summary in BCIRA 37: 809 (1957). (2124)

REDOX POTENTIALS OF VAT DYES. R. Weingarten. Melliand Textilber. 38, No. 8: 913-917 (1957). In German. Through BCIRA 37: 679 (1957). (2125)

Measurement of the redox potential shows that each dye has a specific characteristic leuco potential which, however, cannot be used in vat control. The decisive potential (dyeing potential) is considerably higher and can be determined fairly accurately from the leuco potential curves. The value of the leuco potential, which appears to be of decisive importance for the fastness to boiling with soda, is considerably affected by the position of the substituent (especially in anthraquinone vat dyes), but is independent of dye concentration. The buffering of the system depends upon the number of reducible carboxyl groups.

DYEING HIGH-BULK DRALON. H. Vetter. Textil-Praxis 12, No. 5: 479-485 (1957). In German. Through BCIRA 37: 594 (1957). (2126)

Directions are given for the preparation and dyeing of Dralon high-bulk piece goods or yarn hanks, which are advantageously presteamed or preshrunk with boiling water to obtain the desired crimp and bulk effect. Suitable equipment is described and dye compositions, containing Resolin (for pastel shades), Cellitone (for light to medium shades) and Astrazon dyes (for medium to dark shades) are given.

DYEING POLYESTER FIBERS WITH VAT DYES IN ESTERIFIED AND NONESTERIFIED FORM. J. Müller. Melliand Textilber. 38, No. 9: 1032-1038; No. 10: 1157-1159 (1957). In German. Through BCIRA 37: 810 (1957). (2127)

Survey of the present possibilities of dyeing polyester fibers with vat dyes and their esters. The following methods are pointed out in particular: direct dyeing on the jig with Indanthrene and Anthrasol dyes (light shades); direct dyeing with vat acids and subsequent thermosol process (medium shades); pigment or vat-acid padding with subsequent thermosol process, or use of Anthrasol dyes with addition of acid-separating agents (also followed by the thermosol process) for dark shades. The direct vat-acid method followed by the thermosol process can also be used when suitable dyes are chosen. The methods for dark shades can also be used for medium shades. Single-bath methods for dyeing polyester/cotton fabrics are also reported.

EFFICIENCY OF ORLON DYE-RETARDING AGENTS VS CHEMICAL STRUCTURE. S. Cohen and A. S. Endler (Hart Prods. Corp.). Am. Dyestuff Reptr. 47: 325-328 (May 19, 1958). (2128)

The effect of changes in chemical structure of organic amino compounds on the dye-retardation efficiency of these compounds when used to retard the dyeing of Orlon acrylic fiber by cationic dyes has been investigated. Studies on compounds of known structure revealed that most water-soluble amino compounds have a retarding action and indicated the structural factors which affect retarding efficiency. Graphs. 8 references.

PAD-ROLL DYEING METHOD. Imp. Chem. Inds. Ltd. Textile Weekly 58(1): 1202-1206 (Apr. 25, 1958). (2129)

The pad-roll dyeing technique is described briefly and the application of Nylomine and disperse dyes by this method is discussed.

EFFECT OF DYE AND ACID VALENCES IN WOOL DYEING. J. H. Skinkle (Lowell Technological Inst.). Am. Dyestuff Reptr. 47: 291-296 (May 5, 1958). (2130)

Dyeing data of known accuracy obtained under three sets of conditions, and suitable for testing the effect of acid and dye anion valence on dyeing rate, are presented. Graphs. Tables. 8 references.

EVALUATION OF CARRIERS FOR DACRON DYEING. P. J. Scott (Tanatex Chem. Corp.). Am. Dyestuff Reptr. 47: P303-P308 (May 5, 1958). (2131)

A simple procedure is presented which will allow for a comparative evaluation of two or more carriers. A tentative method to determine the optimum amount of carrier for a given dyestuff combination is also described. Graphs. Tables. Microphotographs. 4 references.

DYEING OF TREVIRA POLYESTER FIBER AND ITS BLENDS WITH SAMARON DYES. W. Kunze. Textil-Praxis 12, No. 8: 810-813 (1957). In German. Through BCIRA 37: 678 (1957). (2132)

In this review, the author discusses the method of application; dispersing of the dyes; their behavior at various pH values; dyeing on high temperature dyeing equipment, open vats, etc.; bleaching or brightening of Trevira materials; suggestions for the selection of Samaron dyes for certain types of material; reducing aftertreatment; antistatic finishing; and dyeing of Trevira/wool and Trevira/cellulose fabrics. The dyes (Farbwerke Hoechst AG) are classified into three groups according to the fastness requirements for the given articles.

PROCION DYESTUFFS FOR THE VISCOSE RAYON CARPET TRADE. J. A. Fowler. Skinner's Silk & Rayon Record 32: 557 (May 1958). (2133)

The properties of the Procion dyes which make them particularly applicable to dyeing viscose rayon tufted carpets are noted, and cold batch and continuous dyeing processes for their application are briefly described.

CONTINUOUS AND SEMI-CONTINUOUS DYEING OF POLYAMIDE AND POLYESTER FIBER PIECE GOODS. A. Würz. Melliand Textilber. 38, No. 7: 777-783 (1957). In German. Through BCIRA 37: 594 (1957). (2134)

Two pad dyeing methods: (1) the emulsion pad dyeing process and (2) the Sesolvan NK process, are described, which under certain conditions make it possible to dye polyamide fabrics from staple fiber or filament yarn in a continuous or semi-continuous manner. Directions are also given for dyeing piece goods from polyester fibers and polyester/cellulose fiber blends.

DYEING CELLULOSE ACETATE PACKAGES. H. Kiess. Textil-Praxis 12, No. 7: 699-702 (1957). In German. Through BCIRA 37: 678 (1957). (2135)

The present state of development in dyeing wound cellulose acetate yarn packages is discussed, and it is shown that the difficulties in dyeing cheeses are overcome by a modified method of using Cellitone Fast dyes. The type and structure of cheeses produced on precision winding machines are described, with reference to the advantage of an "organized" package winding over "wild" winding.

OVERREDUCTION AND OVEROXIDATION DURING PRINTING WITH ANTHRAQUINOID BLUE VAT DYES. G. Bernardy and A. Blum. Melliand Textilber. 38, No. 10: 1159-1163 (1957). In German. Through BCIRA 37: 812 (1957). (2136)

It is shown that, apart from decreasing the amount of reducing agents, shortening the steaming time and using nonsuperheated saturated steam, overreduction of anthraquinoid blue vat dyes can be counteracted by the addition of triethanolamine and sodium nitrite or sodium chlorate. Overoxidation can be avoided by alkaline oxidation with hydrogen peroxide or by oxidation of the prints with water and air. The latter oxidation may be accelerated by passing the prints, after cold preoxidation with running water (spraying), through water baths that are maintained at 70-90° C by the injection of an air/steam mixture.

MICROSCOPIC STUDIES WITH THE HIGH TEMPERATURE (PRESSURIZED) MICRODYEOSCOPE. H. E. Millson (Am. Cyanamid Co.). Am. Dyestuff Reptr. 47: P339-P354 (May 19, 1958). (2137)

The design and construction of the high temperature (pressurized) Microdyeoscope is described. This instrument has a working range from 40° F to 325° F. Operational details are included and illustrated with photographs and drawings. Using this instrument, time-temperature studies have confirmed that the dyeing rates of the newer synthetic fibers are increased appreciably by dyeing at temperatures above 212° F. The diffusion of the dye into the fiber proceeds much more rapidly with all textile fibers in the temperature range 270° F to 300° F compared with the range 200° F to 212° F. The degrading action of various components of the dyebath or treating bath on wool, dyed chlorinated wool, rabbit hair, cotton, dyed viscose rayon, Orlon 42, and Dynel is described and illustrated with photomicrographs. 16 references. Bibliography of 28 references.

DYEING OF COTTON YARN WITH VAT DYES IN MACHINES. X. Dumet. Industrie Textile: 669-674 (Sept. 1957). In French. Through BCIRA 37: 809 (1957). (2138)

Two groups of dyeing methods are reviewed: (1) series dyeing for cops, bobbins, cones mounted on perforated spindles, and warp beams mounted in a similar manner, and (2) package dyeing for hanks, ball warps, and cotton waste.

KARION F LIQUID AS PRINTING ASSISTANT. W. Müller and L. Nagel. Textil-Praxis 12, No. 7: 705-708 (1957). In German. Through BCIRA 37: 679 (1957). (2139)

Karion F liquid consists of 70% sorbitol and has been found to be at least equivalent to glycerine with regard to its hygroscopic properties. The increased brightness of the prints, probably due to the higher light refractivity, increased color intensity of dyes with suitable chemical constitution, and improved viscosity of the printing paste on addition of this chemical make it a valuable printing assistant. Its low hygroscopicity prevents high moisture uptake of the printed cloth during storage and, consequently, premature decomposition of the reducing agent. Karion F liquid does not volatilize with the steam, ensuring that the prints react less to moisture variations during steaming and the dyes are completely fixed. The prints show increased crockfastness.

FIXING PRINTS PRODUCED BY TWO-PHASE PRINTING METHOD. E. Elöd and W. Graeser. Textil-Praxis 12, No. 6: 569-572 (1957). In German. Through BCIRA 37: 595 (1957). (2140)

The advantages of the two-phase printing method (Colloresin process) over the normal Rongalite-potash method are discussed and the rapid developing method of the prints using hydrosulfite (flash-aging process) is described, with reference to the steamer developed by A. Monforts for this purpose.

WETTING OF PRINTED FABRICS BEFORE STEAMING. N. A. Oskorbina and F. I. Sadov. Tekstil. Prom. 17, No. 7: 41-42 (1957). In Russian. Through BCIRA 37: 812 (1957). (2141)

The method described consists in spraying the wrong side of the fabric with water before introducing it into the ager. Increased stability of the printing dye is claimed.

DAMAGE TO CELLULOSE IN THE RONGALITE PROCESS. I. Rusznak and O. Boros. Deut. Textiltech. 7, No. 9: 522-523 (1957). In German. Through BCIRA 37: 812 (1957). (2142)

The difference in the oxidative action of Ludigol (sodium m-nitrobenzene sulfonate) and of hydrogen peroxide on Rongalite (sodium formaldehyde sulfoxylate) was examined. It was found that Rongalite is completely oxidized, forming bisulfate ions, in a rapid, highly exothermal reaction which causes fiber damage during discharge printing. Ludigol oxidizes Rongalite only to compounds of a lower oxidation stage (sulfite, bisulfite). The drop in the pH of the Rongalite solution or of the printing paste caused by hydrogen peroxide can be prevented by suitable additions of calcium carbonate or lead acetate.

PHYSICOCHEMICAL INVESTIGATIONS INTO THE DYEING OF POLYACRYLONITRILE FIBERS WITH BASIC DYES. O. Glenz. Melliand Textilber. 38, No. 10: 1152-1157 (1957). In German. Through BCIRA 37: 811 (1957). (2143)

Measurements of the zeta potential on polyacrylonitrile fibers showed that, during dyeing with basic dyes, the dye is primarily adsorbed on the fiber surface and penetrates into the fiber on heating. Results obtained from measurement of the equilibrium and from various analytical methods lead to the conclusion that the fiber contains a certain number of acid groups which are responsible for the fixation of the dye; the dye absorbability of the fiber being limited by the number of acid groups present. These phenomena are used to explain the dyeing mechanism in polyacrylonitrile fibers in the case of basic dyes.

MECHANICAL PROCESSES D 3

MARK III VELOCITAIR TENTERING MACHINE. E. Gordon Whiteley Ltd. Textile Merc. 138: 731, 733 (May 9, 1958). (2144)

The most important feature of the Mark III Velocitair is its air circulation system which consists of a multilayer nozzle arrangement to achieve rapid recirculation and heat transfer for higher drying efficiency. Photograph.

SGP FABRIC CLEANING AND SHEARING MACHINE. A. Monforts. Textil-Praxis 12, No. 8: 804-805 (1957). In German. Through BCIRA 37: 677 (1957). (2145)

The essential feature of the machine described is a completely independent precleaning unit with its own motor drive and six cleaning rollers (emery, scraping, or brushing rollers) which are exchangeable according to the material to be cleaned prior to shearing. The shearing unit has four cutting motions arranged symmetrically in pairs to treat both sides of the cloth.

CLOTH SHEARING MACHINE: ATTENDANCE AND MAINTENANCE. H. M. Haffner. Z. ges. Textil-Ind. 59, No. 21: 902-907 (1957). In German. Through BCIRA 37: 814 (1957). (2146)

Directions are given for the elimination of faulty performance of the machine, with special reference to sharpening of the lower knife and grinding of the cutting motion.

DRYING D 4

PACKAGE DRYING. PART 2. W. C. Dodson. Textile Bull. 84: 70-74 (Apr. 1958). (2147)

Details of construction and operation of the pressurized air port type, pressurized air kier type, and pressurized, recirculating air condensing type dryers are given. Photographs.

TESTING AND MEASUREMENT E

OPTICAL MEASUREMENTS ON TEXTILES. H. Köb. Textil-Praxis 12, No. 8: 790-796 (1957). In German. Through BCIRA 37: 689 (1957). (2148)

In this review, the author describes and discusses the use of the phase-contrast method and electron microscopy for examining the fine fiber structure, lanameter-type devices for determining wool fineness, optical methods for determining the degree of cotton maturity, yarn testing devices, and photoelectric equipment for testing the degree of whiteness, luster, color, and transparency of textile material.

STATISTICAL EVALUATION OF TESTING RESULTS AS AN AID IN PRODUCTION CONTROL. C. Schubert. Melliand Textilber. 38, No. 7: 729-737 (1957). In German. Through BCIRA 37: 601 (1957). (2149)

The principles of statistical evaluation of test results are discussed and the use of the so-called Statifix (Masing & Co.), which simplifies the calculation of the mean value, standard deviation and coefficient of variation (reducing the time required from 20-30 to 1-1 1/2 min), is explained.

CARE OF INSTRUMENTS. J. W. Fulton. Am. Textile Reptr. 72: 39, 41, 51-55 (May 15, 1958). (2150)

In order to properly maintain the instruments in a typical plant, both a properly equipped instrument shop and fully trained personnel are required. Factors to be considered in setting up a shop and a training program are discussed.

ARRHENIUS EQUATION IN ACCELERATED AGING STUDIES. F. H. Steiger (Rohm & Haas Co.). Am. Dyestuff Reptr. 47: 287-290 (May 5, 1958). (2151)

The problems of aging tests are discussed and examples are given to show how the use of the Arrhenius equation in treating accelerated aging test data permits the rapid and accurate prediction of the future performance of materials. Graphs. 7 references.

RECENT DEVELOPMENTS IN ELECTRONIC INSTRUMENTS FOR TEXTILE PROCESSES. R. Hosmer (Foxboro Co.). Am. Dyestuff Reptr. 47: P329-P332 (May 19, 1958). (2152)

Electronic instruments for the measurement of temperature, flow, density, chemical analysis, etc., are discussed. Flow measurement is discussed in particular. Diagrams. Graph.

FIBERS E 1

SUBJECTIVE ASSESSMENT OF QUALITY IN WOOL TOPS. R. Harper, A. C. McKennell, and W. J. Onions. J. Textile Inst. 49: P126-P140 (Apr. 1958). (2153)

Various psychological aspects of the assessment of wool quality are evaluated. These concern: (1) role of various senses in the judgment of wool tops; (2) development of a mental standard against which to refer any particular sample of wool tops; (3) improvement of techniques of discrimination and matching as a result of training; (4) meaning of the intervals between the successive numbers commonly used on the wool quality scale; (5) relation between the steps on the scale and measured characteristics of wool fibers, including mean fiber diameter of samples of wool tops. Tables. 13 references.

PROBLEM OF BREAKAGES AT THE CLAMPS DURING TENSILE TESTING OF FIBERS. H. Perner. Faserforsch. u. Textiltech. 8, No. 6: 239-244 (1957). In German. Through BCIRA 37: 689 (1957). (2154)

By suitably adapting the clamps to the individual fibers, it is possible to reduce the breakage frequency and to establish a maximum value of permissible breakages so as to obtain reliable and comparable mean values. Results of experiments on cotton and wool show that clamp-breakage frequencies of 16.3 (cotton) and 20.5% (wool) can be included in the mean values for breaking load and breaking elongation without affecting the results.

CALIBRATION OF THE MICRONAIRE FOR DESI COTTONS. F. A. Bhatty, S. A. Ansari, and E. M. Khan. Pakistan Cottons 2: 63-85 (Sept. 1957). (2155)

Pakistan Desi cottons are coarse, short-stapled cottons whose coarseness is a desirable property in blends for achieving special properties in the end product. A study was made of calibration of the micronaire for use with Desi fibers. Graphs. Tables. 26 references.

HAND-OPERATED STAPLE-LENGTH METER. I. Ionescu-Muschel. Tekstil. Prom. 17, No. 5: 70-72 (1957). In Russian. Through BCIRA 37: 818 (1957). (2156)

PREPARING FIBER SECTIONS FOR MICROSCOPICAL EXAMINATION. F. Brunello. Tinctoria 54, No. 7: 276-277 (1957). In Italian. Through BCIRA 37: 729 (1957). (2157)

The method described consists in the inclusion of the fiber tuft to be examined in a sufficiently rigid metallic support to prevent the fibers from bending during cutting and to enable sections perpendicular to the fiber axis to be obtained. The support, which can be used repeatedly, consists of a simple brass foil (0.5 mm thick) with a hole in the center; a nylon-threaded needle is passed through the hole, there and back, to form a loop by means of which the fiber wick to be examined (with the same thickness as the hole diameter) is drawn into the hole of the foil. The fibers are then cut on both sides of the foil, giving a minute section enclosed in the brass foil for microscopical examination.

PORT-AR APPARATUS FOR MICRONAIRE DETERMINATION IN COTTON. F. Fleischle. Melliand Textilber. 38, No. 10: 1102-1104 (1957). In German. Through BCIRA 37: 819 (1957). (2158)

The mechanism of the Port-Ar apparatus for determining the micronaire value of cotton is examined. The apparatus shows good agreement with the known micronaire device. It needs no special weighing installation and no compressor. The device is portable (dimensions 33 x 23 x 28 cm; weight 7.3 kg) and requires practically no maintenance.

YARNS E 2

AUTOMATIC DETERMINATION OF THE NUMBER OF YARN IMPERFECTIONS. S. S. Ivanov and G. A. Shumilov. Tekstil. Prom. 17, No. 3: 41-42 (1957). In Russian. Through BCIRA 37: 730 (1957). (2159)

The device, described and illustrated, is characterized by a stationary disc, the surface of which is provided with an eccentric groove of triangular cross-section (60° at the apex). A rod is suspended on a shaft above the disc; its rectilinear edge forms with the disc a triangular measuring opening, the height of which ranges from 0.08 mm in a device for medium yarn counts (10-85) and from 0.04 mm for high counts (85-200). When a thick section of the thread, fed from a cop over yarn guides, a yarn tensioning device, and a pulley, passes through the opening, deflection of the rod takes place, displacing thereby a terminal on one end of the rod shaft and interrupting the connection with another terminal coupled to a relay and impulse counter. The latter registers, by means of an electronic relay, the number of defective places passing through the device.

SURVEY OF THE PROBLEMS OF YARN TWIST DETERMINATION. K.-H. Banke. Faserforsch. u. Textiltech. 8, No. 7: 280-285 (1957). In German. Through BCIRA 37: 690 (1957). (2160)

Since the Koechlin formula for the calculation of yarn twist is not generally applicable to the whole twist range, attempts were made to develop a generally valid twist equation taking into account the physical fiber properties. The international state of these efforts is reviewed, with reference to the complicated relationships involved. Tables are given listing the most important formulas for calculating the yarn twist and determining the critical degree of twist. 33 references.

AUTODYNAMOGRAPH: PAGNACCO SYSTEM. Tinctoria 54, No. 6: 232-233 (1957). In Italian. Through BCIRA 37: 730 (1957). (2161)

The improved, completely automatic apparatus is designed to test simultaneously several samples fed from bobbins on a special creel; the type suitable for cotton yarn is adapted for 70 tests per cycle (10 from each of the 7 bobbins tested), while that used for wool and artificial fiber yarn effects 50 tests per cycle (5 from each of 10 bobbins). The complete cycle of 70 or 50 tests (strength and elongation at break) is registered by points in the diagram, together with the mean value at the end of each cycle. The characteristic feature of the apparatus is the nature of the clamps, in which the yarn is fixed by adjustable pressure without transversal or rotatory movement. Additional means are provided for testing samples in the wet state.

TIRE CORD TESTING. W. Frenzel and W. Kittelmann. Faserforsch. u. Textiltech. 8, No. 6: 222-230 (1957). In German. Through BCIRA 37: 690 (1957). (2162)

Review of the static and dynamic stresses to which tires are subjected, and of the testing methods, by means of which it is possible to determine the behavior of the textile tire components to these stresses. The individual methods are criticaliy examined and suggestions made for further development. 30 references.

INSTRUCTIONS FOR THE USE OF THE ITT TWIST AND PRODUCTION SLIDE RULE. O. Heiberg and S. C. Lawrence. Inst. of Textile Technol., Charlottesville, Va., Apr. 28, 1958. 17 p. ITT report no. 20. (2163)

RECORDING YARN TENSION VARIATION. Schweiter Ltd. Skinner's Silk & Rayon Record 32: 516-517 (May 1958). (2164)

Features of the Schweiter double disc tension DD 2660 recorder for cotton yarns and the compensating tension DD 5025 recorder for manmade fibers are described. The latter is designed to compensate for the fluctuations in the yarn tension occurring when unwinding yarn from cross-wound bobbins, spinners' cakes, etc., at high winding speeds. Photographs. Diagrams.

TENSILE STRENGTH TESTER. G. P. De Clercq. Ann. Sci. Textiles Belges No. 2: 84-128 (June 1957). In French. Through BCIRA 37: 730 (1957). (2165)

The construction and mechanism of the tensile strength tester described make it possible to subject a bundle of 100 threads to increasing stretching to cause their progressive rupture and to record at the same time the frequency distribution of the breaking elongations and the total stress as a function of this elongation. The results are interpreted and evaluated; they show that the apparatus gives, apart from the mean and frequency distribution of the elongation at break and skein strength, a fairly accurate mean strength value for the individual threads.

STUDIES IN YARN IRREGULARITY: A CRITICAL REVIEW OF LITERATURE. S. M. Nawaz and J. A. Khan. Pakistan Cottons 2: 56-62 (Sept. 1957). (2166)

13 references.

MEASUREMENT OF TWIST IN NYLON MONOFIL. J. D. Owen (Shirley Inst.). (Letter to the editor). J. Textile Inst. 49: T223-T226 (Apr. 1958). (2167)

The method described can be carried out with very simple apparatus, and the accuracy of the results, although less than that obtained by Astle-Fletcher (abstr. 1333/57), appears to be sufficient for many practical purposes. Photograph. Tables.

FABRICS E 3

TEST METHODS TO DETERMINE WASH AND WEAR PROPERTIES. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Mar. 1958. 10 p. Bull. X-83. Free. (2168)

Wash crease retention, wear crease retention, wash wrinkling, wear wrinkling, and seam puckering, fraying, or failure. Photographs.

PILLING TESTER. K. Dörrer and H. Kutsche. Deut. Textiltech. 7, No. 8: 449-456 (1957). In German. Through BCIRA 37: 731 (1957). (2169)

Definition is given of the pilling effect, and international pilling testers, methods and specifications, and derivation of the test conditions by studying the movements during wear are discussed. Experiments for determining an effective rubbing movement and for shortening the testing time by changing the abrading agent are described. The pilling effect produced by means of a pilling tester and results from wear tests are compared; they show good agreement on the woven and knitted fabrics tested.

EVALUATING THE PILLING EFFECT IN KNIT FABRICS. G. Edelmann and G. Heine. Deut. Textiltech. 7, No. 7: 400-404 (1957). In German. Through BCIRA 37: 731 (1957). (2170)

A standard for the visual evaluation of the pilling effect is proposed, grading the appearance of the fabric from 0-4. The suitability of the recommended standard is demonstrated on practical examples.

DETERMINATION OF FEATHER AND DOWN TIGHTNESS BY MEANS OF THE STUMPP APPARATUS. A. Lisson and E. Reindl. Melliand Textilber. 38, No. 10: 1104-1106 (1957). In German. Through BCIRA 37: 822 (1957). (2171)

The combined testing method described (determination of air-permeability and mechanical tests on the Stumpp apparatus) makes it possible to obtain reliable values for the feather- and down-tightness of ticking material.

MICROBIOLOGICAL TESTS. M. Nopitsch. Melliand Textilber. 38, No. 8: 932-937 (1957). In German. Through BCIRA 37: 691 (1957). (2172)

Microorganisms responsible for the destruction of textiles are enumerated and conditions favoring microbial attack are described. Methods for testing the susceptibility of textiles to microorganisms and the antibacterial activity of textile finishes are reviewed, with reference to DIN specifications, and American, French, and Dutch methods used.

MECHANICAL WASHFASTNESS AND MILLING TESTS. Wullschleger & Schwarz. Dyer 119: 621 (Apr. 25, 1958). (2173)

The washing and milling effects produced on Prexa machines are in line with those produced in the Launderometer and SDC wash wheel if special working recommendations are observed. These are summarized.

FABRIC FAULT SIGNALLING DEVICE. P. Baulin. Industrie Textile: 593-594 (Aug. 1957). In French. Through BCIRA 37: 730 (1957). (2174)

OTHER E 4

BIBLIOGRAPHICAL ABSTRACTS OF METHODS FOR ANALYSIS OF SYNTHETIC DETERGENTS: 1933-1957. 1957 suppl. J. C. Harris. Am. Soc. for Testing Materials, 1916 Race Street, Philadelphia 3, Pa. 1958. 24 p. Special tech. pub. no. 150-B. $1.50. (2175)

ARTIFICIAL SOILING DURING EVALUATION OF DETERGENTS. L. Teichmann. Deut. Textiltech. 7, No. 8: 462-466 (1957). In German. Through BCIRA 37: 732 (1957). (2176)

Composition, method of application, concentration and aging of artificial soils are discussed, and method and apparatus are described for the evaluation of detergents, using a soiling agent which is applicable regardless of time of preparation, textile material and detergent used. The soiling agent, whose preparation is described, consists of: (1) 100 g Kaolin, 60 g ground shale, 10 g black iron oxide, 30 g acetylene soot; (2) 30 g Estamol GZ, 10 g wool fat; (3) 120 g Indian ink; (4) 140 g water.

RESIDUAL FAT DETERMINATIONS IN POLYACRYLONITRILE WOOL FABRICS. W. Döcke. Deut. Textiltech. 7, No. 6: 338-339 (1957). In German. Through BCIRA 37: 691 (1957). (2177)

The causes of excessively high residual fat content in ether extracts of wool/polyacrylonitrile fabrics of the Prelana-type were investigated.

INDUSTRIAL ENGINEERING F

MACHINERY AND MAINTENANCE F 1

MOLDED NYLON IN THE TEXTILE INDUSTRY. P. Abbenheim. Skinner's Silk & Rayon Record 32: 506-510 (May 1958). (2178)

Nylon is useful as a plastics material in the textile industry because of its self-lubricating properties, good dimensional stability, and high strength. The main types being used and their specific applications, e.g. for bobbins, pickers, bearings, gear wheels, cams, travelers, etc., are described. Photographs.

OBTAINING EFFICIENCY IN BOILER OPERATIONS. L. Walter. Textile Bull. 84: 74-78 (Apr. 1958). (2179)

QUALITY CONTROL F 3

QUALITY CONTROL DEPARTMENT IN A TEXTILE MILL. S. M. Jayarao (Vikram Mills Ltd). Bull. Quality Control Assoc., Bangalore 4: 36-39 (1957). (2180)

Improvements in various aspects of running conditions and quality control were accomplished and are reported.

OTHER F 4

JOB EVALUATION AND WORK SIMPLIFICATION. R. D. Stevens. Textile World 108: 47-50, 148 (May 1958). (2181)

The essential techniques for setting up an effective job evaluation and work simplification program are described. The application of these techniques can cut costs, use manpower more efficiently, and eliminate waste time and motion.

MODIFIED TECHNIQUE FOR ACTIVITY SAMPLING IN WORK STUDY. D. L. Cooper and J. G. Miller (Wool Inds. Research Assoc.). J. Textile Inst. 49: T173-T180 (Apr. 1958). (2182)

The paper describes a modification of the usual method of carrying out activity sampling or snap-reading surveys such that an observer can obtain estimates of average element times and frequencies, in addition to the proportions of time that machines and operatives spend on particular tasks, without making separate frequency or time studies. Tables.

SCIENCES G

CHEMISTRY G 1

A PRACTICAL THEORY OF DETERGENCY IN RELATION TO THE LAUNDERING OF COTTON TEXTILES. S. V. Vaeck and G. E. Boorsma. Ann. Sci. Textiles Belges No. 1: 56-90 (Mar. 1958). (2183)

A theory of detergency as applied to cotton laundering (commercial white work) is proposed. It is based on one hand on the distinction between three fundamental types of soils: particulate, fatty, and mixed soils (colored stains fall outside the scope of this discussion), and on the other hand on the recognition that three active forces are at work: total interaction potential between particles and fibers, dispersivity of soil aggregates, and emulsifying power. The first and second of these forces act on the particulate soil, the third on the fatty soil. Graphs. Tables. 19 references.

DEGRADATION OF CELLULOSE IN A VACUUM WITH ULTRAVIOLET LIGHT. J. H. Flynn, W. K. Wilson, and W. L. Morrow. J. Research Nat. Bur. Standards 60: 229-233 (Mar. 1958). (2184)

This paper describes the irradiation of purified, dried, cotton cellulose in an evacuated system with 2537 A light. The composition and rate of evolution of gaseous products were measured and changes in functional group content and degree of polymerization of the irradiated cellulose were determined. Diagrams. Graphs. 18 references.

SURFACTANTS LISTED: FOURTH REVISION OF SYNTHETIC DETERGENTS AND EMULSIFIERS. J. W. McCutcheon. MacNair-Dorland Co., Inc., N. Y. 1958. 78 p. Available from John W. McCutcheon, Inc., 475 Fifth Ave., New York 17, N. Y. $2.50. (2185)

Reprinted from Soap & Chemical Specialties, Dec. 1957, Jan., Feb., Mar., Apr., 1958.

DEGRADATION OF CELLULOSIC FIBERS IN CONTACT WITH RUSTING IRON. W. A. Bell and J. M. Gibson (Brit. Jute Trade Research Assoc.). (Letter to the editor). Nature 180: 1065 (Nov. 16, 1957). (2186)

PROTECTING OXIDIZED CELLULOSE FIBERS FROM ALKALI ATTACK. G. Machell. Skinner's Silk & Rayon Record 32: 525-529 (May 1958). (2187)

Cellulosic fibers undergo oxidation during their production and subsequent use, and the oxycelluloses produced are broken down extremely rapidly by mild alkalis such as soap. The nature of the alkali degradation process is discussed. In order to prevent the breakdown of the cellulose, it is necessary to know how the reaction occurs. The problem is particularly difficult because the oxycelluloses produced by oxidation in commercial and domestic conditions contain oxidized units of three types, and there is as yet no way of measuring accurately the contribution of each type in a given oxycellulose. 14 references.

THERMAL DEGRADATION OF CELLULOSIC MATERIALS. S. L. Madorsky, V. E. Hart, and S. Straus. J. Research Nat. Bur. Standards 60: 343-349 (Apr. 1958). (2188)

This paper describes results of a further study of the thermal degradation of cellulosic materials, including cotton cellulose, Fortisan, cellulose triacetate, and NO_2-oxidized cellulose. Graphs. Tables. 3 references.

SOIL RETENTION BY TEXTILE FIBERS. A. S. Weatherburn and C. H. Bayley. Research 11: 141-146 (Apr. 1958). (2189)

A brief review of some of the work on mechanisms of soil retention carried out at the Textile Research Section of the National Research Council, Ottawa, Canada. Graphs. 18 references.

WET-SOILING STUDIES ON RESIN-TREATED COTTON FABRICS. L. W. Mazzeno, Jr., R. M. H. Kullman, R. M. Reinhardt, H. B. Moore, and J. D. Reid (So. Regional Research Lab.). Am. Dyestuff Reptr. 47: P299-P302 (May 5, 1958). (2190)

In the course of research on "wash-and-wear" cottons, the tendency toward wet soiling was studied. Conditions under which wet-soiling occurs were determined and various components of a number of commercial resin formulations were examined to determine causes of soiling. A simple laboratory test for wet-soiling was adopted using a Launder-Ometer with soap solution as the detergent and carbon black as the soiling agent under conditions approximating commercial laundering. The effect of variables on soiling was determined. Causes of soiling are outlined and the effects illustrated with photographs, electron micrographs, tables, and graphs. 13 references.

STUDY OF THE ELASTIC MODULUS AND EXTENSIBILITY OF THE CRYSTALLINE REGIONS IN HIGHLY ORIENTED POLYMERS. W. J. Dulmage and L. E. Contois (Eastman Kodak Co.). J. Polymer Sci. 28: 275-283 (Mar. 1958). (2191)

The elastic modulus of highly oriented crystalline polymers is discussed in terms of a series model. Graphs. Tables. 8 references.

LONG-PERIOD INTERFERENCES IN SYNTHETIC FIBERS. H. Rothe. Faserforsch. u. Textiltech. 8, No. 6: 244-253 (1957). In German. Summary in BCIRA 37: 689 (1957). (2192)

EXPLANATION OF CHEMICAL REACTIONS IN TEXTILE CHEMISTRY BY THE ELECTRONIC THEORY OF VALENCY. P. Kadach. Textil-Praxis 12, No. 8: 813-820 (1957). In German. Through BCIRA 37: 679 (1957). (2193)

DRYCLEANING: TECHNOLOGY AND THEORY. A. R. Martin and G. P. Fulton (Nat. Inst. of Drycleaning). Textile Book Publishers, Inc., New York 1, N.Y. 1958. 269 p. $6.00. (2194)

The technology and theory of drycleaning are discussed under the headings: development of drycleaning, soiling of fabrics, the detergent process in aqueous systems, mechanisms of soil removal in drycleaning, drycleaning solvents, drycleaning detergents based on soap, synthetic drycleaning detergents, colloid chemistry of nonaqueous solutions, moisture relations in the drycleaning bath, electrical conductance in the drycleaning bath, scientific basis of garment finishing, and physical effects related to finishing. 255 references.

PHYSICS G 2

RADIOACTIVE ISOTOPES AND THEIR TEXTILE APPLICATIONS. J. Roussel. Ann. Sci. Textiles Belges No. 2: 55-67 (June 1957). In French. Through BCIRA 37: 728 (1957). (2195)

After a brief review of the properties of matter and the principles of radioactivity, the author discusses the use of radioactive isotopes in suppressing static electricity, as indicators (in printing and oiling), and as tracers (e.g. in studying the elimination of sulfur after decomposition of the xanthate in viscose manufacture, and in determining soap residues during washing of raw wool). The Geiger-Muller counter used is described.

SOILING OF CELLULOSE HYDRATE FIBERS. W. Bandel. Melliand Textilber. 38, No. 6: 648-653 (1957). In German. Through BCIRA 37: 604 (1957). (2196)

Factors responsible for the soiling and cleaning of carpets and means for reducing their sensitivity to soiling are investigated and related to the physical properties of the individual fibers. Soil-repellent finishes are reviewed and yarn scouring is recommended to remove the residual fat content of the fiber (residues of brightening agents, spinning oils, and dye assistants), since even a subsequent soil-repellent finish is not able to reduce the soiling promoted by a residual fat content of over 0.5%.

ESTABLISHING A RADIOCHEMICAL LABORATORY. I. A. Berstein (Controls for Radiation, Inc.). Am. Dyestuff Reptr. 47: P297-P298, P309 (May 5, 1958). (2197)

This paper discusses the general requirements for developing a small radiochemical laboratory suitable for investigative and analytical applications of radioactivity to textile problems. 25 references.

USE OF RADIOACTIVE ISOTOPES IN THE TEXTILE INDUSTRY. K. Meyer. Deut. Textiltech. 7, No. 8: 439-440 (1957). In German. Summary in BCIRA 37: 729 (1957). (2198)

Review. 36 references.

BIOLOGY G 3

EVALUATION OF FUNGICIDAL TREATMENTS IN COTTON CARGO PARACHUTE WEBBINGS STORED AT WRIGHT AIR DEVELOPMENT CENTER. E. F. Little. Wright Air Development Center, Wright-Patterson Air Force Base, Dayton, Ohio. May 1957. 98 p. Order from Office of Technical Services, Washington 25, D.C. $2.50. WADC tech. report 56-384. PB 131 158. (2199)

Five fungicidal formulations, with or without water repellents, were applied to four types of cotton cargo parachute webbings. Three of the formulations contained copper-8-quinolinolate, one contained dihydroxydichlorodiphenyl methane, and one contained dehydroabietyl ammonium acetate. Evaluations included: (1) soil burial, (2) simulated tropical storage, (3) shelf storage under laboratory conditions, (4) agar plate exposure, and (5) agar plate exposure following laboratory shelf storage.

MISCELLANY H

RESEARCH, PROBLEM-SOLVING, AND THE USE OF TECHNICAL INFORMATION IN SMALL AND MEDIUM SIZED MANUFACTURING FIRMS. Herner, Meyer & Co., Washington 7, D. C. 1958. 26 p. Available from Office of Technical Services, Washington 25, D. C. 75¢. (2200)

A survey of 500 small and medium-sized firms in the food, textiles, electricity, and metal fabrication industries to find out how these firms solved technical problems and made use of technical information.

THE EUROPEAN COMMON MARKET AND PROPOSED FREE TRADE AREA AND THE TEXTILE INDUSTRY. A. M. Alfred and J. M. Low. J. Textile Inst. 49: P99-P106 (Mar. 1958). (2201)

HOW TECHNOLOGISTS CAN HELP SALES. W. M. Kelly. Modern Textiles Mag. 39: 57-61 (May 1958). (2202)

The role of the textile technologist in the planning and control functions of management is explained.

TENTATIVE TEXTILE TERMS AND DEFINITIONS. J. Textile Inst. 49: P141-P157 (Apr. 1958). (2203)

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington, 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

YARN PRODUCTION B

LIQUID TREATMENT OF THREADS. Soc. Rhodiacéta. BP 763 364, Dec. 12, 1956. Through BCIRA 37: 663 (1957). (2204)

The principle of the J-box as used in the continuous wet processing of fabrics is adapted to the treatment of yarns.

YARN LIQUID TREATMENT APPARATUS. W. V. Coles (to Courtaulds Ltd). BP 763 471, Dec. 12, 1956. Through BCIRA 37: 663 (1957). (2205)

Roller dipping in the liquid takes up a film and gives it up to an inclined plate having beveled edges and acting like a doctor blade. The thread is led into the film of liquid as it comes off the roller and travels with it.

CUTTING STAPLE LENGTHS FROM TOWS OF ARTIFICIAL FILAMENTS. Farbenfabriken Bayer AG. BP 764 397, Dec. 28, 1956. Through BCIRA 37: 663 (1957). (2206)

Tow is supplied to the cutter while hanging freely and as wet as possible, a supplementary sheath of liquid being provided if necessary. The cutter knives press against a support roller, e.g. of polyamide or rubber-covered, moving in the same direction.

DRAFTING MECHANISM. SKF Kugellagerfabriken GmbH. BP 765 262, Jan. 9, 1957. Through BCIRA 37: 708 (1957). (2207)

Top roll carrier arm, reaching over at least part of the set of top rolls and pivoted to a bracket fixed by a supporting rod to the machine framework, is fitted with a pair of opposed wedge-shaped members to clamp the bracket to the rod.

APPARATUS FOR CLEANING THE DRIVING BELTS OF TEXTILE MACHINES. J. W. Wood (to Brushes (Textile & Industrial) Ltd). BP 765 866, Jan. 16, 1957. Through BCIRA 37: 708 (1957). (2208)

The unit comprises a brush with at least one tuft of metallic bristles, mounted on an electrically conducting bracket where the brush can make contact with the traveling belt. Alternatively, there may be two brushes, flat or rotary, with the belt running between them.

BLOWER APPARATUS FOR CLEANING TEXTILE MACHINES. W. Dietz. BP 765 876, Jan. 16, 1957. Through BCIRA 37: 708 (1957). (2209)

A blower is provided with a trough into which the blast drives the dust and fly. The trough is shaped so that eddy currents are created in it and the dust, etc., is driven into a receiver.

APPARATUS FOR STRETCHING SYNTHETIC YARNS. W. Kotte and W. Gollos (to Vereinigte Glanzstoff Fabriken AG). BP 766 025, Jan. 16, 1957. Through BCIRA 37: 703 (1957). (2210)

The yarn is stretched by passage over two rollers, the second rotating at a higher surface speed. Each roller has two rows of rounded elements arranged in staggered relation so that the yarn bears alternately on the elements in each row.

BALMES DRAFTING MECHANISM. Estirajes Balmes SA. BP 766 100, Jan. 16, 1957. (Addition to BP 742 958). Through BCIRA 37: 708 (1957). (2211)

APPARATUS FOR OIL SPRAYING FIBERS. G. Calamai. BP 766 731, Jan. 23, 1957. Through BCIRA 37: 707 (1957). (2212)

Gas under controlled pressure from a common reservoir is led by several pipes to nozzles at the bottom of the container for the oil and water. A nozzle is closed when the pressure is cut off by a ball falling into a seat.

OPENING, PICKING, FIBER PREPARATION B 1

COTTON OPENING MACHINES. R. A. Rusca and R. C. Young (to Dodd Investments Ltd). BP 766 953, Jan. 30, 1957. Through BCIRA 37: 708 (1957). (2213)

In order to prevent revolving shafts from acting on the fiber to create neps and cause obstructions, a junction between the shaft and the suction flue is provided. It consists of a disc-like extension of the shaft, of larger diameter, protruding into a circular opening in the flue wall. Fiber particles are thrown off by the disc and carried away in the air stream.

AUTOMATIC LAP FORMING MACHINE. Kanegafuchi Boseki KK. BP 786 852, Nov. 27, 1957. Through BCIRA 38: 16 (1958). (2214)

Automatic lap forming machine comprises a series of calender rollers, a pair of lap forming rollers, a lap roller rotated on and by contact with the lap forming rollers, a press roller resting on the lap and positively driven at the same speed as the lap forming rollers, a pair of bars supporting the press roller and having racks meshing with gears fixed to a shaft carrying a brake drum operated by a lever, and means for releasing the lever from the drum immediately a required length of lap is wound on the lap roller.

CARDING AND COMBING B 2

CARDING MACHINE COMB SHAFT. E. Schafer (to VEB Spinnereimaschinenbau). BP 763 303, Dec. 12, 1956. Through BCIRA 37: 668 (1957). (2215)

The usual crank drive for the comb shaft of a carding machine is replaced by a gear that comprises two eccentrics mounted on parallel shafts, and a transmission member fixed to the comb shaft and driven by both eccentrics.

SLIVER CAN PACKING. Fairbairn Lawson Combe Barbour Ltd. BP 763 521, Dec. 12, 1956. Through BCIRA 37: 668 (1957). (2216)

Rammer for packing sliver into a can comprises a weighted head carried by a piston rod oscillated axially in an air cylinder, a catch for connecting the rod and cylinder for movement in one direction only, and air leakage means for controlling the rate of fall of the rod on disengagement of the catch.

DRAWING AND ROVING B 3

DRAFTING MECHANISM. SKF Kugellagerfabriken GmbH. BP 764 783 and 764 809, Jan. 2, 1957. Through BCIRA 37: 668 (1957). (2217)

The top roller carrier arm is fitted with a fixture for retaining in position a selected top roller holder (e.g. the middle one of three) and the other holders have extensions that, at the widest setting, reach at least as far as the fixture. By this device, all the holders can be retained in position by the one fixture.

ELECTRICAL CONTROL SYSTEMS [FOR REGULATING DRAFTING]. Deutscher Spinnereimaschinenbau and Niederlassung der Schubert & Salzer Maschinenfabrik AG. BP 780 174, July 31, 1957. Through BCIRA 37: 509 (1957). (2218)

ROVING FRAME. C. Delesalle (France). BP 785 485, Oct. 30, 1957. Through BCIRA 37: 801 (1957). (2219)

Means for inserting false twist, to the extent of at least half the final twist, in the portion of roving between the delivery roller and the top of the flyer so as to minimize the tendency of the roving to stretch in this region. A funnel with a roughened rim two or three times wider than the flyer tube is fitted above the top of the tube. The roving bears against and rolls on the rim before it enters the tube.

APPARATUS FOR CLEANING CLEARER ROLLS. J. K. McCollough, Jr. (to Deering Milliken Research Corp.). USP 2 832 084, Apr. 29, 1958. (2220)

Rotary brush arrangement for removing accumulations of lint or other foreign matter from the felt covering or padding of clearer rolls.

SLIVER COILER. H. P. Jackson (to McDonough Power Equip., Inc.). USP 2 832 099, Apr. 29, 1958. (2221)

Coiler, which is universal in its application, is adapted to be driven from existing power takeoffs without modification of the takeoff. It is easily adaptable to receive containers of various diameters.

SPINNING, WINDING, TWISTING B 4

FEED DEVICE FOR HIGHLY TWISTED YARNS. J. Jabouley (to Fras. Hinde & Sons Ltd). BP 763 366, Dec. 12, 1956. Through BCIRA 37: 669 (1957). (2222)

In a method for transferring highly twisted yarn, untensioned, between supply and delivery points, the length of yarn between these points is given a number of turns about a glass rod in the direction opposite to its twist. The rod is set at a suitable angle, found by trial, to the feed path.

APPARATUS FOR PLYING YARNS. A. D. Gatling (to Dunlop Rubber Co. Ltd). BP 764 714, Jan. 2, 1957. Through BCIRA 37: 669 (1957). (2223)

In a device for feeding two yarns to a plying point at equal speeds, a constant length of yarn coming from one package is rotated about the other package by means of a guide tube supported at its ends by tubular spindles co-axially mounted and each carrying one of the package supports.

LUBRICATING SPINNING RINGS. Manufacture Alsacienne de Broches. BP 764 732, Jan. 2, 1957. Through BCIRA 37: 668 (1957). (2224)

Wick leading from an oil well is arranged in an annular groove in the ring and feeds oil to other wicks branching off to various holes in the traveler-bearing face of the ring.

UPTWISTING MACHINE. F. Scragg (to S. & E. Scragg Ltd). BP 764 834, Jan. 2, 1957. Through BCIRA 37: 669 (1957). (2225)

In uptwisting nylon yarn at high speed and low twist, so as to produce a soft cheese, a yarn forwarding roller is fixed between the usual fixed and reciprocating yarn guides and driven by a band from the takeup roller at such a speed that the yarn is fed to the reciprocating guide slightly faster than it is taken up by the cheese.

SPINNING RING. W. S. Brown (to Brit. Celanese Ltd). BP 765 074, Jan. 2, 1957. Through BCIRA 37: 708 (1957). (2226)

Steel ring, furnished with conventional ducts for oil wicks, is roughened over the surface against which the traveler bears by etching with acid or by sand blasting.

AUTOMATIC LOWERING OF RING RAILS IN SPINNING AND TWISTING MACHINES. Borås Wäfveri AB. BP 764 979, Jan. 2, 1957. Through BCIRA 37: 668 (1957). (2227)

SPINDLE CLUTCH. Spinnbau GmbH. BP 766 102, Jan. 16, 1957. Through BCIRA 37: 708 (1957). (2228)

In a clutch for a helical gear drive for a spinning or twisting spindle, one part of the clutch is connected to the drive shaft and the other to the helical gear wheel. This part is movable selectively into or out of engagement with the first part while the helical screw and gear wheel remain meshed together.

BROKEN END CUTTING DEVICE FOR TWISTING FRAMES. S. Bourne & Co. Ltd. BP 766 166, Jan. 16, 1957. Through BCIRA 37: 709 (1957). (2229)

RING SPINNING MACHINE TRAVELER. T. Nesbitt-Dufort (to Fairbairn Lawson Combe Barbour Ltd). BP 766 697, Jan. 23, 1957. Through BCIRA 37: 709 (1957). (2230)

Traveler for a conical ring is molded from nylon and is roughly triangular. One portion is perpendicular and widens from top to bottom. The base and top portions are hooked to grip the ring. The center of gravity is away from the center of frictional resistance in the direction opposite to that of rotation.

UPTWISTING MACHINE. E. Findlow (to Ernest Scragg & Sons Ltd). BP 782 917, Sept. 18, 1957. Through BCIRA 37: 669 (1957). (2231)

The conical yarn package is mounted adjacent to and is driven by engagement with a delivery roller; it is oscillated so that the point of contact reciprocates in synchronism with the traverse of a yarn guide that reciprocates longitudinally of the roller.

TENSION DEVICE FOR MULTI-TWIST SPINDLE. Barmer Maschinenfabrik AG. BP 785 500, Oct. 30, 1957. Through BCIRA 37: 802 (1957). (2232)

The invention relates to a device for compensating yarn tension in a cabling spindle fitted with a doubling flyer above a supply bobbin. The device is a bow of hard, chromium-plated steel wire or a flat structure with an edge fitting of porcelain, glass, or hard plastic, and is clipped to the doubling flyer. The yarns are guided over it separately from one another.

TENSION DEVICE FOR TWISTING SPINDLE. Barmer Maschinenfabrik AG. BP 785 770, Nov. 6, 1957. Through BCIRA 37: 802 (1957). (2233)

Thread-tensioning device for a multi-twist twisting spindle comprises a pair of discs mounted in the thread run-in section eccentrically of the inlet hole. One disc is caused by the drag of the thread to rotate with respect to the other disc and the two discs are urged together by a permanent magnet which, with removable spacers, is located in a pot-shaped part made of transparent material.

THREAD LENGTH CONTROL APPARATUS FOR BOBBIN WINDING MACHINE. F. Grosse-Borger. USP 2 832 147, Apr. 29, 1958. (2234)

SPINDLE DRIVE. Schiess AG. BP 785 553, Oct. 30, 1957. Through BCIRA 37: 802 (1957). (2235)

Driving clutch, especially for large package spindles, with which a smooth start is possible. It comprises two members on one shaft, one provided with friction surfaces and the other with coupling teeth or jaws. The clutch first establishes frictional driving connection and then positive.

MOUNTING YARN ILLUMINATING APPARATUS ON ROVING, SPINNING, AND TWISTING FRAMES. W. C. Longman (to E. Wadsworth & Sons Ltd). BP 786 081, Nov. 13, 1957. Through BCIRA 37: 801 (1957). (2236)

A lamp housing is mounted on a bracket carried by a pillar on the machine frame. A beam of light is directed downwards through an inner tube in the housing, then through a lens and on to a mirror mounted on the same pillar at such an angle that the beam is deflected across the line of threads.

NYLON YARN MANUFACTURE. J. A. Place, G. A. White, and G. G. Thomas (to Brit. Nylon Spinners Ltd). BP 786 354, Nov. 13, 1957. Through BCIRA 37: 802 (1957). (2237)

Multifilament yarn consisting mainly of a synthetic linear polymer (e.g. nylon) and having little or no twist is run between two moving surfaces (at least one being the surface of a roller) that effect intermittent separation (without rupture) of the filaments over random, short lengths, and the product is then twisted into a yarn.

DRAFTING APPARATUS FOR TEXTILE MACHINES. W. A. Hunter (to T. M. M. (Research) Ltd). BP 786 528, Nov. 20, 1957. Through BCIRA 37: 801 (1957). (2238)

Guide for sliver or roving comprises two flanking portions or cheeks with inwardly facing convex surfaces for engaging the sides of the sliver or roving as it emerges from the orifice of the guide in such a way that outlying fibers are driven inwards and readily grasped by the next following drafting elements.

AUTOMATICALLY FORMING MOLDED RING TRAVELERS. J. & P. Coats Ltd. BP 786 920, Nov. 27, 1957. Through BCIRA 38: 16 (1958). (2239)

Method for continuously casting or molding ring travelers of plastic material with a wire insert.

SUPPLYING BOBBINS TO TWISTING FRAMES. F. T. Sobey (to E. Wadsworth & Sons Ltd). BP 787 077, Dec. 4, 1957. Through BCIRA 38: 16 (1958). (2240)

Traveling trolley or carriage that runs the whole length of a two-sided twisting frame on upper and lower pairs of rails.

VARIABLE SPEED CONTROL FOR RING SPINNING FRAMES. W. Leutert (to Soc. Brematex). USP 2 831 312, Apr. 22, 1958. (2241)

Means for automatically reducing the speed of a spinning frame, when the ring rail reaches its end position, to a lower speed suitable for underwinding the cops.

FALSE TWIST SPINDLE. S. L. Cole (to T. M. M. (Research) Ltd). BP 786 580, Nov. 20, 1957. Through BCIRA 37: 802 (1957). (2242)

Hollow spindle is fitted at one end with one or more guides so that thread passing freely through the tube may be wound over the guide and thereby constrained to follow a sinuous path in a plane normal to the axis of the spindle. A takeup guide or lappet is located on the axis.

YARNS B 5

YARN PACKAGE CARRIER. K. C. Jackson and T. B. Frearson (to Brit. Celanese Ltd). BP 763 490, Dec. 12, 1956. Through BCIRA 37: 674 (1957). (2243)

MULTIPLE CORE YARNS. Can. Minister of Defence. BP 783 001, Sept. 18, 1957. Through BCIRA 37: 669 (1957). (2244)

A roving, and a filament yarn under tension, are twisted together to form a core yarn; two such yarns are then twisted together in the reverse direction to form a multiple core yarn in which the individual fibers and filaments have substantially no twist.

NYLON YARN MANUFACTURE. L. Pownall (to Brit. Nylon Spinners Ltd). BP 786 420, Nov. 20, 1957. Through BCIRA 37: 802 (1957). (2245)

Polyamide or polyester yarn of one or more filaments is run through a device that imparts a zig-zag form, and the deformations are set by heat. A suitable apparatus is a circular knitting machine fitted with infrared lamps.

CLIP AND CUTTER FOR COTTON REELS. F. P. Jones. BP 786 574, Nov. 20, 1957. Through BCIRA 37: 803 (1957). (2246)

A C-shaped clip has a hole at one end through which cotton is threaded on the reel and a V-shaped slot with cutting edges at the other end. It fits loosely around the reel, and keeps the free end under control without hindering its winding off.

STRETCH YARNS. Heberlein & Co. AG. BP 787 167, Dec. 4, 1957. Through BCIRA 38: 16 (1958). (2247)

Yarn characterized by high stretch and power of absorbing moisture, suitable as a hand knitting yarn, is obtained by folding together crimped synthetic fiber yarns (e.g. nylon, 150 den., 46 fil., 2,100 turns per meter) with crimped cellulosic rayon yarns (e.g. viscose, 150 den., 40 fil., 2,100 tpm), setting by steam, and twisting back to a normal twist.

COMPOSITE GLASS FIBER REINFORCED PAPER YARN. W. G. Bacon, Jr. (to E. W. Twitchell, Inc.). USP 2 832 190, Apr. 29, 1958. (2248)

Relatively light, strong, cheap, and compressible yarn composed of paper wound helically around a glass fiber filament core. Yarns of this type are used in filling out carpet base fabrics, for braiding the outer sheath of electric cable, as a reinforcing filler for plastics, etc.

BULKED YARNS. T. C. Woodman (to Horrockses Spinners & Mfrs. Ltd). BP 787 157, Dec. 4, 1957. Through BCIRA 38: 16 (1958). (2249)

Bulked yarn is made from singles, continuous-filament, or staple yarns of nylon or Terylene and the like by doubling together a nonshrunk yarn with a heat preshrunk yarn and then submitting the doubled yarn to a heat shrinking process.

FABRIC PRODUCTION C

MEASURING CHANGES IN LENGTH OF YARNS OR WEBS. Gebrüder Sucker GmbH. BP 765 712, Jan. 9, 1957. Through BCIRA 37: 712 (1957). (2250)

The invention relates principally to means for measuring a change in length of a yarn or web after undergoing a treatment. A rotary wheel is connected with electrical means for transmitting impulses every revolution. One such wheel is put in the path of the yarn or web before the place where the treatment occurs (e.g. a drying chamber) and one after it, and the numbers of impulses received in a given time are compared.

WARPING, SLASHING, YARN PREPARATION C 1

YARN TENSION DEVICE. V. Svaty and L. Taticek (to Mira Nar. Pod.). BP 763 537, Dec. 12, 1956. Through BCIRA 37: 674 (1957). (2251)

The yarn runs between a rotary drum and one or more rollers made of magnetic material that can rotate and also move axially towards and away from the circumference of the drum. Adjustable magnetic means are used for urging the roller(s) towards the circumference.

LIQUID FLOW CONTROL IN WARP SIZING MACHINE. L. Armstrong (to Tootal Broadhurst Lee Co. Ltd). BP 763 965, Dec. 19, 1956. Through BCIRA 37: 674 (1957). (2252)

CREELS. C. Whitehead. BP 766 446, Jan. 23, 1957. Through BCIRA 37: 712 (1957). (2253)

The invention relates to a creel for beaming or cross-ball warping in which the yarn is drawn endwise from the packages and the creeling is from inside. The package supports are swingable about an axis that passes transversely through the package so that axial replenishment may be effected from a direction other than that in which the over-end unwinding occurs.

THREAD TENSION DEVICE FOR WINDING FRAMES. M. Siegel (to VEB Spinn- und Zwirnerei Maschinenbau). BP 766 517, Jan. 23, 1957. Through BCIRA 37: 712 (1957). (2254)

The double-disc tensioner comprises a housing with a lead-in for the yarn, a pair of discs mounted for free rotation on a bolt, a control knob mounted in the housing coaxially with the bolt, and an inclined recess in the side of the knob facing the discs having a hemispherical recess for a ball that bears on one of the discs. A turn of the knob moves the ball along its recess and thus alters the pressure on the disc.

TRAVERSE MECHANISM FOR PIRN WINDERS. H. L. Muschamp and J. R. Grady. BP 764 968, Jan. 2, 1957. Through BCIRA 37: 674 (1957). (2255)

Mechanism having a pivoted guide on a reciprocated carriage is fitted with further means for overriding the normal reciprocation so as to impart a bunch building oscillation for the start of the pirn.

ELECTRONIC SLUB DETECTOR. J. F. Scholten (to Zonan Curacao NV). BP 771 499, Apr. 3, 1957. Through BCIRA 37: 806 (1957). (2256)

Slub detector comprises a condenser, between the electrodes of which the yarn is run, connected in a branch of an oscillating, high-frequency tube circuit so that the energy output varies with the mass of the yarn elements. The high frequency oscillation is rectified and fed into a relay circuit for operating a cutter.

APPARATUS FOR ADJUSTING TENSION IN CORD WOUND FROM ONE PACKAGE TO ANOTHER. H. W. Trevaskis (to Dunlop Rubber Co. Ltd). BP 786 165, Nov. 13, 1957. Through BCIRA 37: 806 (1957). (2257)

The invention relates particularly to means for adjusting and reducing the tension in tire cord when being wound on a tire-building former. The cord is transferred from a source to a drum that is driven by clutch mechanism under control from a spring-loaded device for producing a pre-determined tension in the cord between the source and the drum. The clutch is engaged or disengaged if the tension seriously rises above or falls below the required tension.

CONTROL OF ELECTRIC MOTOR DRIVING WARP WINDERS. Comptoir de l'Industrie Cotonnière, Etablissements Boussac. BP 786 257, Nov. 13, 1957. Through BCIRA 37: 806 (1957). (2258)

It is claimed that the drive provides for (1) a normal speed in a warp sheet of 10-60 m/min, (2) a slow speed of 2 m/min, (3) a six-fold change in diameter of the roll, (4) automatic maintenance of constant tension, (5) adjustable tension, e.g. between 20 and 120 kg, (6) tension maintained during a stop or relaxed as desired, and (7) winding back the roll when the supply machine is at rest. A circuit diagram is given.

SIZING AND POLISHING OF SEWING THREAD. F. Osborne (to Wm. Ayrton & Co. Ltd). BP 786 482, Nov. 20, 1957. Through BCIRA 37: 806 (1957). (2259)

The running yarn is made to take at least one turn around the rotary brush that applies the size in a polygonal path (constrained by guides) in such a way that more than one span makes contact with the brush. Further, feed-back of tension due to contact with the brush is prevented and, if desired, compensation is made for stretch.

HYDRAULIC BOBBIN GRIPPING AND STRIPPING DEVICE. J. S. W. Haas. USP 2 832 124, Apr. 29, 1958. (2260)

WEAVING C 2

PICK AND PICK WEAVING. W. Murphy and H. Gardner (to Hield Bros. Ltd). BP 757 715, Sept. 26, 1956. Through BCIRA 37: 485 (1957). (2261)

Pick and pick method of weaving two superimposed layers of cloth, united at their edges (as in a tubular fabric) but in such a way that on cutting the interconnecting weft picks to make two separate cloths, each layer would have acceptable selvages rather than raw edges.

CONTROL OF POLYPHASE INDUCTION MOTORS FOR SHUTTLE PROPULSION. E. R. Laithwaite and J. C. West (to Nat. Research Develop. Corp.). BP 763 362, Dec. 12, 1956. Through BCIRA 37: 675 (1957). (2262)

NARROW FABRIC LOOM. C. Devaud (Switzerland). BP 763 421, Dec. 12, 1956. Through BCIRA 37: 675 (1957). (2263)

The weft is inserted in looped double picks by means of a needle, and an auxiliary thread passes through each loop, a hook being used to catch the loop and pull it around a cop supplying the auxiliary thread, the needle meanwhile being withdrawn slightly so that the loop is slack.

SELF THREADING SHUTTLES. W. V. Watson. BP 764 302 and 764 303, Dec. 28, 1956. Through BCIRA 37: 675 (1957). (2264)

Lining of the top of a self threading shuttle at the weft exit with bristles or pile fabric (mohair, nylon, fine wire, etc.) as an antiballooning device. The bristles or pile ends are inclined downwardly towards the center line of the shuttle.

PILE WIRE CARPET LOOM MECHANISM. R. S. Work and E. W. Shertz (to Lansdowne Steel & Iron Co.). BP 764 461, Dec. 28, 1956. Through BCIRA 37: 675 (1957). (2265)

The invention is concerned with a carpet loom of the Wilton type and is designed to use the more efficient and productive rope pull wire motion instead of the chain pull when weaving 3-shot fabric (three picks of worsted yarn per pile wire).

CARPET LOOM HEDDLE FRAME ACTUATING MECHANISM. R. S. Work (to Lansdowne Steel & Iron Co.). BP 764 462, Dec. 28, 1956. Through BCIRA 37: 674 (1957). (2266)

Loom fitted with a vertically movable heddle frame, reciprocated by means of rack and pinion mechanism.

WEFT YARN CLAMPING DEVICE. W. V. Gledhill. BP 764 595, Dec. 28, 1956. Through BCIRA 37: 675 (1957). (2267)

One or both of the jaws of a clamp for gripping the trailing end of weft so that it may more readily be cut (as part of the automatic weft replenishment) is fashioned with serrations parallel to the weft direction in the loom.

WEFT STOP MOTION FOR HIGH SPEED PNEUMATIC LOOM. Výzkumný ústav Tvárecích Stroju a Technologie Tváreni. BP 765 049, Jan. 2, 1957. Through BCIRA 37: 713 (1957). (2268)

The weft feeler lever is pivoted to a member that swings in time with the pick and penetrates between the warp ends before the next pick. If the weft is intact the feeler is deflected about its pivot pin on withdrawal, otherwise it operates an electrical device for stopping the loom.

SELVAGE FORMATION. D. W. Shimwell (to Weaving Research & Textile Commn. Agents Ltd). BP 765 657, Jan. 9, 1957. Through BCIRA 37: 712 (1957). (2269)

The invention relates to a loom that enables weft patterns to be produced having looped and cut ends in a selvage. The loops are formed around pins provided with cutters and when a loop has been cut at a pin means fitted to the weft-inserting device withdraw the weft from the point of severance wholly or partly from the warp shed.

LUG STRAP. W. Bescoby (to Sam Kay & Co. Ltd). BP 765 979, Jan. 16, 1957. Through BCIRA 37: 713 (1957). (2270)

Durable lug strap is made by bending a strip of stainless steel, 19 x 1-1/4 in., into a U, the arms of which are about 8-1/2 in. long and 2 in. apart, and the bend is fitted with a buffer of solid rubber. Two such straps may be bolted together at the open ends, one buffer serving to check the picking stick, which slides between the arms, and the other to check the picking arm. The lug strap and the picking stick are joined by a leather strap.

ELECTRIC WARP STOP MOTIONS. C. Wagner. BP 766 321 and 766 322, Jan. 23, 1957. Through BCIRA 37: 713 (1957). (2271)

PICKER. Gebroeders Prakke NV. BP 766 421, Jan. 23, 1957. Through BCIRA 37: 713 (1957). (2272)

Part of the hide around the bore for the picking spindle is replaced by a polyamide.

WEFT-FEEDING APPARATUS FOR GRIPPER SHUTTLE LOOM. Sulzer Frères SA. BP 766 755, Jan. 23, 1957. Through BCIRA 37: 712 (1957). (2273)

Apparatus for selectively feeding two or more different wefts comprises weft feeders mounted in a feeder changing element and movable both parallel with and transversely of the weft path. There are individual guides for the feeders and at least one common guide rigidly mounted on the loom frame outside the changing element.

ALTERING THE STROKE OF A JACQUARD GRIFF. Maschinenfabrik Carl Zangs AG. BP 766 954, Jan. 30, 1957. Through BCIRA 37: 712 (1957). (2274)

An adjustable cam is mounted on each side of the jacquard frame for moving the griff through a two-part rod which is adjustable in length by means of a screwed spindle associated with a scale.

LOOSE REED LOOMS. W. R. Coxon (to Logan, Muckelt & Co. Ltd). BP 786 063, Nov. 13, 1957. Through BCIRA 37: 807 (1957). (2275)

The reed is held or gripped in the lay both at the top and the bottom by releasable pivoted arms that release the reed if it moves on to a trapped or misplaced shuttle or other obstruction during beatup. The arms may be interconnected so that moderate resistance releases the lower grip only and the reed swings around the upper support, whereas greater resistance releases both grips.

WEFT CLAMPING AND CUTTING DEVICE. W. V. Gledhill. BP 786 173, Nov. 13, 1957. Through BCIRA 37: 807 (1957). (2276)

The invention claims three forms of a weft grabber for a weft-replenishing loom. Preferred features are that (1) the jaws are serrated and (2) a round brush of fine wire is connected to the clamp, both to assist in catching the weft.

METHOD AND APPARATUS FOR DETERMINING WARP CRIMP. Licencia Találmanyokat Ertékesitó Vállalat. BP 786 912, Nov. 27, 1957. Through BCIRA 38: 19 (1958). (2277)

A group of warp threads is clamped, relaxed to a predetermined load, marked to a predetermined length, unclamped and restored to the original tension, and weaving is then continued until the marked length is woven in. The actual length of fabric produced is compared with the length of warp. The apparatus includes a sensitive feeler for use in relaxing the tension to the required amount.

SHUTTLES FOR RIBBON LOOMS. Adolph Saurer Ltd. BP 787 223, Dec. 4, 1957. Through BCIRA 38: 19 (1958). (2278)

The shuttle houses a cylindrical bobbin and is formed, where the bobbin lies, of two plane surfaces meeting at an angle of at least 90° and a spring-loaded cover that tends to push the bobbin into the corner as its diameter decreases. The yarn leaves through an eye in the body of the shuttle extending over the length of the bobbin and its tension is governed by the friction against the two planes and the cover.

LOOM LETOFF AND TAKEUP. P. Cerdans Sellés (Spain). USP 2 820 485, Jan. 21, 1958. (2279)

Automatic mechanism which synchronizes the winding movement of the cloth with the warp letoff, allowing a slight excess ratio of supply of the warp in order to compensate for yarn used in tying and for variations in yarn tension and elasticity.

LOOM FILLING GRATE. S. Livingstone. USP 2 832 376, Apr. 29, 1958. (2280)

To increase the abrasion resistance and lint repellency of a filling grate, its face is either coated with a silicone, vinyl, phenol, urea, or polystyrene resin, or it is composed of chromium, while its remaining external surfaces are coated with polytetrafluoroethylene or polytrifluoroethylene.

WEFT INSERTION DEVICE. R. Dewas (France). BP 786 531, Nov. 20, 1957. Through BCIRA 37: 807 (1957). (2281)

Springy needle and a guard that not only protects the warp ends but controls the end of the weft when it is released from the clamp.

KNITTING C 3

KNIT FABRIC. R. Salem (to Melas Hosiery Co. Ltd). BP 786 773, Nov. 27, 1957. Through BCIRA 38: 20 (1958). (2282)

Nylon or Terylene yarn is knitted with such a low degree of takeoff tension that the loops are irregular in shape, size, and symmetry, and the article is subjected to a setting treatment.

PLATED STRETCH HOSIERY. H. Knohl (to Kendall Co.). USP 2 832 125, Apr. 29, 1958. (2283)

Stretch hosiery produced by knitting two oppositely twisted thermoplastic yarns in plated relationship, seaming, and boarding at temperatures below the annealing temperature of the yarns.

FABRICS C 4

COATED NONWOVEN FABRICS. Johnson & Johnson (Gt. Brit.) Ltd). BP 763 456, Dec. 12, 1956. Through BCIRA 37: 676 (1957). (2284)

Nonwoven fibrous sheet, bonded together here and there (e.g. in lines or at points) is coated with, and partly embedded in, a thermoplastic film material (e.g. polyvinyl chloride and a Cellosolve plasticizer). The product may then be coated with an adhesive and cut into surgical tape, or used as it is for wrapping purposes.

NONWOVEN FABRICS. G. H. Elliott (to Brit. Cellophane Ltd). BP 764 865, Jan. 2, 1957. (Addition to BP 695 805). Through BCIRA 37: 675 (1957). (2285)

The parent invention covered the use of viscose, cuprammonium solution of cellulose, or an alkali solution of a cellulose ether as bonding agent. A softer and more resilient fabric is obtained by using a rubbery material such as rubber, balata, or a butadiene/acrylonitrile copolymer. Further, to improve the sewing properties the fabric may be impregnated with a polyorganosiloxane resin, in the proportion of 0.25–2.5% on the weight of dry rubber.

PRODUCTION OF WEBS OR MATS OF BONDED STAPLE LENGTHS OF GROUPED FILAMENTS. S. Palmer (to Versil Ltd). BP 785 935, Nov. 6, 1957. Through BCIRA 37: 801 (1957). (2286)

The invention relates to apparatus for grouping and bonding together monofils of glass or a thermoplastic and then (1) drafting the product, (2) cutting into short lengths under tension, and (3) discharging the cut lengths in random arrangement on to a conveyor for forming a mat suitable for conversion into resin-impregnated laminates. Air traction is used in the operations.

CURTAIN HEADING TAPE. R. S. L. Carr (to James Carr & Sons Ltd). BP 786 513, Nov. 20, 1957. Through BCIRA 37: 807 (1957). (2287)

Threads to form the pockets run parallel with the warps and are woven as floats that appear first on one face of the tape and then on the other. Only one shuttle is used in weaving.

HOOK OR EYE FASTENING TAPE. F. Beckmannshagen. BP 786 535, Nov. 20, 1957. Through BCIRA 37: 807 (1957). (2288)

The invention relates mainly to a corset fastener. The tape to which the hooks and eyes are sewn is woven with two outside strips in plain weave (e.g. taffeta, one 18 mm wide and the other 8 mm) and an inside strip in a pile weave (e.g. plush, 36 mm wide), so that when the tape is folded the pile strip serves as a cushion behind the fasteners.

HOOKED PILE FABRIC. K. Forster (Germany). BP 786 921, Nov. 27, 1957. Through BCIRA 38: 20 (1958). (2289)

Pile fabric in which the tips of the pile threads are bent over into little hooks so that two pieces of the fabric will cling together when placed face to face. The pile is provided by thermoplastic fibers and the tips are turned over by means of a heated roller with a concave-faceted surface.

APPARATUS FOR BONDING FIBERS TOGETHER. M. A. Chavannes and J. W. Howden (to Chavannes Industrial Synthetics Inc.). BP 787 073, Dec. 4, 1957. Through BCIRA 38: 19 (1958). (2290)

Padding material is made by directing a current of air laden with particles of a thermoplastic resin (e.g. vinyl acetate/chloride copolymer) through a mass of loose fiber (e.g. cotton), heating the mass to render the resin plastic and then cooling it to bond some of the fibers together.

BELTING. F. W. Warren and W. Lord (to Dunlop Rubber Co. Ltd). BP 787 177, Dec. 4, 1957. Through BCIRA 38: 20 (1958). (2291)

Fire-resistant fabric for belting is made from yarns partly of cotton, rayon, nylon, or Terylene and partly of flexible vinyl polymers or copolymers. The components may be doubled together in the warp and/or weft yarns.

APPARATUS FOR THE MANUFACTURE OF NONWOVEN TUFTED FABRICS, PARTICULARLY CARPETS. P. M. Cole (to E. I. du Pont de Nemours & Co.). USP 2 831 525, Apr. 22, 1958. (2292)

BONDED NONWOVEN FABRICS FOR LEATHER REPLACEMENT MATERIALS. W. A. Ragan (to E. I. du Pont de Nemours & Co.). USP 2 832 713, Apr. 29, 1958. (2293)

Scuff-resistant, water repellent, soft nonwoven fabric prepared by bonding several layers of nonwoven fiber mats by means of an extensible binder, the surface layer alone being composed of undrawn and crystallized fibers.

ALTERNATE NEEDLE TUFTING MACHINE. J. H. Wear (to Russell-Lacey Mfg. Co.). USP 2 832 301, Apr. 29, 1958. (2294)

Tuft loop inserting needles are arranged so that alternate groups of needles can insert loops of different colors into a base fabric in accordance with a selected pattern.

FINISHING AND CHEMICAL PROCESSING D

CHEMICAL PROCESSES D 1

ANTISTATIC AGENT. Boehme Fettchemie GmbH. BP 763 215 and 763 216, Dec. 12, 1956. Through BCIRA 37: 688 (1957). (2295)

Antistatic dressing for synthetic fibers comprises an alkylene oxide addition product of a sulfamide having in the hydrocarbon radical at least 6 C atoms, e.g. dodecylbenzenesulfonamide.

FIXATION OF MECHANICALLY PRODUCED EFFECTS. Ciba Ltd. BP 763 268, Dec. 12, 1956. Through BCIRA 37: 686 (1957). (2296)

Mechanical effects, especially on viscose rayon, are fixed by the application of an alkyl ether of a urea-formaldehyde condensation product containing per mol. of urea more than 2 mol. of formaldehyde in the form of methylol groups.

WATERPROOFING TEXTILES. J. Ramsey and S. Fordham (to Imp. Chem. Inds. Ltd). BP 763 464 and 763 465, Dec. 12, 1956. Through BCIRA 37: 687 (1957). (2297)

Textile materials are rendered water repellent by treating them with an emulsion of a silicone oil in an aqueous solution at pH 2-8, of an alkali salt of an alkyl, aryl, or aralkyl siliconic acid, and a thermosetting resin precondensate, followed by baking.

FABRIC ORNAMENTATION. C. S. Parker and A. Melville (to Bleachers' Assoc. Ltd and Bradford Dyers' Assoc. Ltd). BP 763 933, Dec. 19, 1956. Through BCIRA 37: 687 (1957). (2298)

By operating a compressive-shrinkage machine in reverse, at least one region of a fabric is stretched while adjacent regions are relaxed. The stretched regions are thereby raised from their normal level. The effect may be set, e.g. by impregnating the fabric with a thermosetting resin and applying heat.

HOSIERY STEAMING CHAMBER. E. E. Bellmann, R. Kronsbein, and F. Bellmann (Germany). BP 764 739, Jan. 2, 1957. Through BCIRA 37: 687 (1957). (2299)

The carriages conveying the stockings are received in the chamber by a rotary plate on which there are pressure members or filling pieces that use up the vacant spaces and against which the doors press when the chamber is closed. The chamber roughly resembles a 2-way cock in that the passage through the plug is the chamber and this is closed by turning the plug.

FINISHING THERMOPLASTIC FABRICS. J. G. Evans, G. Landells, and C. Fearnley (to Bradford Dyers' Assoc. Ltd). BP 764 088, Dec. 19, 1956. Through BCIRA 37: 687 (1957). (2300)

Permanent embossed patterns are produced on thermoplastic fabrics (e.g. nylon, Terylene, polyvinyl chloride, and vinylidene chloride) by applying the treatment while the fabric is saturated with water, which may contain a swelling agent.

PROOFING MANMADE FIBERS. J. G. Evans, G. Landells, J. R. W. Perfect, B. Topley, H. Coates, W. A. Reeves, and J. D. Guthrie (to Bradford Dyers' Assoc. Ltd and Albright & Wilson Ltd). BP 764 312, Dec. 28, 1956. Through BCIRA 37: 687 (1957). (2301)

Synthetic materials capable of conversion into filaments, films, or moldings are intimately mixed with a tetrakis-hydroxymethylphosphonium salt or a tris-hydroxymethylphosphine oxide or a mixture of such phosphorus compounds, and, if desired, a functional compound capable of reacting with formaldehyde. The effects on the filaments and films spun or cast from the mixtures include reduced flammability, reduced sensitivity towards water, and increased resistance to microbiological attack.

CONTINUOUS PROCESS FOR DESIZING, SCALDING, AND/OR BLEACHING. J. Dungler (Luxembourg). BP 764 483, Dec. 28, 1956. Through BCIRA 37: 682 (1957). (2302)

The material is impregnated with one or more chemical agents that will react with one or more of the impurities, passed through a heated chamber in which the wet material is very rapidly dried and the reaction is accelerated and intensified, and then washed. Jets of superheated steam are played on the material as it enters the chamber.

CHLORITE BLEACHING. Soc. Rhodiacéta. BP 764 649, Dec. 28, 1956. Through BCIRA 37: 682 (1957). (2303)

The bleaching agent is a hot chlorite solution containing an ester, e.g. ethyl acetate, lactate or tartrate, glycol or glycerol acetates or formates, or γ-butyrolactone. The pH is maintained at 6-8 and the agents are so chosen that acidity does not develop by oxidation.

WATERPROOFING COMPOSITION. Boehme Fettchemie GmbH. BP 765 208, Jan. 2, 1957. Through BCIRA 37: 728 (1957). (2304)

The agents used are high-molecular esters of phosphoric acid. The effects are enhanced if compounds of the urea, cyanamide, and melamine types are also present in the impregnating liquor.

FIREPROOFING CELLULOSE TEXTILES. F. Ward (to Courtaulds Ltd). BP 765 222, Jan. 9, 1957. Through BCIRA 37: 727 (1957). (2305)

Cotton and viscose rayon fabrics are fireproofed by impregnation and baking with a vinyl ester of an acid of phosphorus (e.g. divinyl aminophosphonate), or an ester that will decompose on heating to give a vinyl ester (e.g. bis-2-chloroethyl aminophosphonate).

FIREPROOFING FABRICS, PAPER, AND OTHER POROUS MATERIALS. L. J. C. van de Zande (Belgium). BP 765 237, Jan. 9, 1957. Through BCIRA 37: 727 (1957). (2306)

The material is impregnated with a solution containing ammonium sulfate (10–50 g/l of water), ammonium phosphate (10–50), boric acid (1–15), and borax (1–15) and also glycerin (1–5%) and Turkey red oil (1–5%).

ROTARY WASHING MACHINE. G. Dowell (to Cherry Tree Mach. Co. Ltd). BP 765 358, Jan. 9, 1957. Through BCIRA 37: 732 (1957). (2307)

The rotary container for the goods (e.g. garments) is enclosed in a stationary casing with a liquid entry at its lower part and an outlet at a higher level. A settling tank is fitted between the two levels so that liquid from below the scum may flow back. A vertically adjustable overflow pipe enables the dip within the casing to be adjusted.

STRETCHABLE RESIN COATED FABRICS. K. O. Berry (to Bernard Wardle (Everflex) Ltd). BP 765 374, Jan. 9, 1957. Through BCIRA 37: 727 (1957). (2308)

Fabric coated with a thermoplastic resin of the polyvinyl chloride type is rendered stretchable by passing it through water at 75–100° C and drying without tension.

INCREASING THE DURABILITY OF TEXTILES BY IMPROVING THEIR RESISTANCE TO ABRASION. E. X. C. M. A. Dupont (France). BP 765 735, Jan. 9, 1957. Through BCIRA 37: 726 (1957). (2309)

An emulsified oil, wax, or other lubricant is added to a final rinsing bath so as to restore lubricant lost in previous wet processes.

MULTISTAGE LAUNDERING PROCESS. Boehme Fettchemie GmbH. BP 765 811, Jan. 16, 1957. Through BCIRA 37: 732 (1957). (2310)

The goods are washed, in any sequence, at temperatures up to 60° C, at least once in a liquid containing a cation-active substance and at least once in a liquid containing an anion-active substance. The examples deal with the washing of woolen piece goods heavily soiled with dust, soot, and mineral oil, and soiled nylon shirts.

IMPROVING THE ABRASION RESISTANCE OF CREASEPROOF FABRICS. R. A. Derrett-Smith and R. W. Kinkead (to Linen Industry Research Assoc.). BP 766 265, Jan. 16, 1957. Through BCIRA 37: 726 (1957). (2311)

Cellulosic fabrics (especially linen) that have been given a creaseproof finish are rendered more resistant to abrasion by the application of a thermoplastic resin (e.g. ethyl acrylate/vinyl acetate copolymer).

FABRIC SIZING. Farbwerke Hoechst AG. BP 766 330, Jan. 23, 1957. Through BCIRA 37: 727 (1957). (2312)

The warp for the fabric is sized with a conventional size to which is added a vinyl copolymer. The fabric is steamed and calendered. The effect is fast to washing.

ROTPROOFING COMPOSITION. A. E. T. Neale and B. D. Rowland (to Dunlop Rubber Co. Ltd). BP 766 798, Jan. 23, 1957. Through BCIRA 37: 728 (1957). (2313)

The rotproofing resistance of belting and plastic hose made of resin-impregnated cotton or rayon fabric is improved by incorporating in the resin a plasticized hydroxydi-(or tri)-arylmethane.

CORROSION RESISTANT GLASS FIBER FABRIC. D. Deverell and N. C. W. Judd (to United Kingdom Atomic Energy Authority). BP 766 841, Jan. 23, 1957. Through BCIRA 37: 726 (1957). (2314)

A glass fiber web or fabric is impregnated with a suspensoid of polytetrafluoroethylene, the liquid medium is evaporated and the web or fabric is raised nearly to the temperature at which the fluorine compound sinters.

POLYSILOXANE COMPOSITIONS FOR RENDERING FABRICS RESISTANT TO GREASE AND WATER. Midland Silicones Ltd. BP 766 864, Jan. 23, 1957. Through BCIRA 37: 728 (1957). (2315)

QUATERNARY AMMONIUM COMPOUNDS AS SOFTENING AGENTS FOR RAYON. Ciba Ltd. BP 782 974, Sept. 18, 1957. Through BCIRA 37: 685 (1957). (2316)

WATERPROOFING CELLULOSE TEXTILES. Boehme Fettchemie GmbH. BP 783 123, Sept. 18, 1957. Through BCIRA 37: 687 (1957). (2317)

Cellulose textiles are treated simultaneously with an acid-reacting wax emulsion containing aluminum or zirconium salts and a precondensate (e.g. urea-formaldehyde) with an excess of aldehyde.

CHLORITE BLEACHING. J. Dungler (Luxembourg). BP 783 287, Sept. 18, 1957. Through BCIRA 37: 682 (1957). (2318)

Corrosion of machine parts by chlorine dioxide during bleaching with chlorite solutions is avoided by impregnating the cellulose material with the bleaching agent and passing it through a heating chamber that is supplied with super-heated steam and from which vapor may be exhausted.

FIREPROOFING TEXTILES. J. D. Broatch (to Brit. Jute Trade Research Assoc.). BP 785 610, Oct. 30, 1957. Through BCIRA 37: 817 (1957). (2319)

The agent comprises a suspension of orthoantimony phosphate and a chlorinated vinyl resin. Sodium carboxymethylcellulose is a convenient suspending agent and a plasticizer (e.g. tricresyl phosphate) and an inert filler (e.g. china clay) may also be present. The five examples relate to the treatment of jute fabrics.

SCOURING POLYESTER FIBERS. Farbwerke Hoechst AG. BP 786 153, Nov. 13, 1957. Through BCIRA 37: 815 (1957). (2320)

Processes involving the boiling of materials of the Terylene group with caustic soda can be safely carried out without much loss of weight (e.g. not more than 5%) if the liquor contains a glycol or polyglycol of mol wt 4,000–5,000.

TREATMENT OF VISCOSE RAYON TO REDUCE WATER UPTAKE. R. S. Mahomed (to Courtaulds Ltd). BP 786 383, Nov. 20, 1957. Through BCIRA 37: 817 (1957). (2321)

The ability of viscose materials to hold water is reduced by impregnating them with propiolic acid (e.g. a 3% solution) or with propargyl alcohol plus mercuric chloride as catalyst, followed by baking at about 140° C. In two examples, the water-imbibition of viscose skeins was reduced from 96% to 46 and 57% respectively.

WATERPROOFING TEXTILES. V. A. Stroud (to A. J. Dickinson Ltd). BP 786 444, Nov. 20, 1957. Through BCIRA 37: 818 (1957). (2322)

Use of the 3:5:5-trimethylhexan-1-ol (Nonanol) esters of titanic and zirconic acids as waterproofing agents, especially in conjunction with microcrystalline wax. They are applied as solutions in drycleaning solvents.

ORGANO-SILICON WATERPROOFING COMPOUNDS. Midland Silicones Ltd. BP 786 452, Nov. 20, 1957. Through BCIRA 37: 818 (1957). (2323)

ANTISTATIC AGENT FOR SYNTHETIC STAPLE FIBERS. Farbwerke Hoechst AG. BP 786 953, Nov. 27, 1957. Through BCIRA 38: 15 (1958). (2324)

The tendency of fibers of the polyamide, polyester, cellulose acetate, acrylic, and vinyl groups to develop electrostatic charges is reduced by impregnating them with a salt of a low-molecular vinyl or allyl polymer containing sulfo groups bound through C, S, or O atoms, e.g. sodium polystyrene sulfonate.

COATED GLASS FIBER SHEET. W. Schuller (Germany). BP 787 245, Dec. 4, 1957. Through BCIRA 38: 20 (1958). (2325)

The invention is designed to overcome the known tendency of sheets of glass fiber to develop creases and cracks when being made into insulating board and the like. The sheets are impregnated with a plastic (cellulosic, vinylic, acrylic or of the phenol or amine/aldehyde type), heated and then coated with bitumen, tar, or pitch. Four types of suitable plant are shown in the illustrations.

ANTISTATIC COPOLYMER OF SULFONATED STYRENE AND VINYL PYRIDINE. S. A. Murdock, T. G. Traylor, and T. B. Lefferdink (to Dow Chem. Co.). USP 2 829 066, Apr. 1, 1958. (2326)

Antistatic agent for synthetic fibers consisting of a copolymer of a sulfonated styrene and a vinyl pyridine.

METHOD AND APPARATUS FOR PRODUCING LAMINATED SHEETING FROM A CALENDERED SHEET. E. Procopio (to Rhee Elastic Thread Corp.). USP 2 831 526, Apr. 22, 1958. (2327)

A method and apparatus for producing laminated sheeting from a calendered sheet in which the calendered sheet is taken from the calender and laminated into sheeting of the desired number of plies without interrupting operation of the calender, without cutting the calendered sheet between laminations, and without the necessity for shifting heavy rolls of partially laminated sheeting.

GERMPROOFED FABRICS CONTAINING NEOMYCIN. R. P. Parker and A. Abbey (to Am. Cyanamid Co.). USP 2 830 011, Apr. 8, 1958. (2328)

Durable antibacterial finishes are obtained by treating the fabrics with an aqueous solution containing at least 0.0001% by weight of neomycin.

TEXTILE WASTE RECOVERY PROCESS. A. H. Drelich (to Chicopee Mfg. Corp.). USP 2 832 663, Apr. 29, 1958. (2329)

In the recovery of cellulose fibers from bonded nonwoven fabric waste, the copolymer of vinyl chloride and methyl acrylate used as the bonding agent is removed by treatment with a dilute caustic solution containing a low molecular weight aliphatic alcohol.

FLAMEPROOFING CELLULOSIC MATERIALS. I. Hechenbleikner (to Shea Chem. Corp.). USP 2 832 745, Apr. 29, 1958. (2330)

Permanent flameproofing without tendering or stiffness is achieved by the use of a composition containing diethyl phosphoramidate, bromoform adduct of triallyl phosphate, and trimethylolmelamine.

ANTISTATIC, MOISTURE PERMEABLE FABRIC COATINGS. H. L. Jackson (to E. I. du Pont de Nemours & Co.). USP 2 832 746 and 2 832 747, Apr. 29, 1958. (2331)

DYEING AND PRINTING D 2

SCREEN PRINTING MACHINE. W. Hoffmann and W. Gahlert (to VEB Textilmaschinenbau Zittau). BP 763 030, Dec. 5, 1956. Through BCIRA 37: 685 (1957). (2332)

Stencil printing machine has an endless band running at the side of the table on which there are pattern-repeat stops, capable of fine adjustment, that set the stencil carriages and stop the intermittently movable table at the right position.

PROCESS FOR DYEING OR PRINTING CELLULOSE-CONTAINING TEXTILES WITH COPPER POLYAZO DYES. Ciba Ltd. BP 763 071, Dec. 5, 1956. Through BCIRA 37: 684 (1957). (2333)

DYEING OR PRINTING CELLULOSE-CONTAINING TEXTILES WITH COPPER COMPLEXES. Ciba Ltd. BP 763 973, Dec. 19, 1956. Through BCIRA 37: 685 (1957). (2334)

DYEING POLYVINYL CHLORIDE FIBERS WITH ANTHRAQUINONE DYES. Compagnie Francaise des Matières Colorantes. BP 765 356, Jan. 9, 1957. Through BCIRA 37: 724 (1957). (2335)

COLORING WARP YARN. P. Stevens (Belgium). BP 783 134, Sept. 18, 1957. Through BCIRA 37: 674 (1957). (2336)

Dyeing tanks are provided to enable simultaneous coloring and weaving on the same loom.

DYEING OR PRINTING THERMOPLASTIC FIBERS. A. Lauchenauer (to Raduner & Co. AG). BP 764 954, Jan. 2, 1957. Through BCIRA 37: 685 (1957). (2337)

The affinity of thermoplastic fibers (polyamides, polyesters, polyacrylics) for dyes, and their comfort in wear, are improved by precipitating within them regenerated cellulose, a protein, or polyvinyl alcohol.

DYEING POLYAMIDE FIBERS. Sandoz Ltd. BP 765 080, Jan. 2, 1957. Through BCIRA 37: 724 (1957). (2338)

Level dyeings are obtained on polyamide fibers by using metallizable azo dyes, a copper salt, and a salt of tartaric, citric, lactic, salicylic or sulfosalicyclic acid in a bath containing an alkali carbonate.

PRODUCING DYEINGS FAST TO CROSS-DYEING ON CELLULOSE ACETATE, NYLON, AND PERLON. Farbwerke Hoechst AG. BP 765 740, Jan. 9, 1957. Through BCIRA 37: 724 (1957). (2339)

DYEING TERYLENE TYPE FIBERS BY THE AZOIC DEVELOPMENT PROCESS. Badische Anilin und Soda Fabrik AG. BP 766 298, Jan. 16, 1957. Through BCIRA 37: 724 (1957). (2340)

DRIVE FOR MULTI-COLOR PRINTING MACHINE. A. Lewis (to Bollington Printing Co. Ltd). BP 766 598, Jan. 23, 1957. Through BCIRA 37: 725 (1957). (2341)

SKELETON CORES OR BOBBINS FOR DYEING. E. B. Davidson (to Davidson Springs Ltd). BP 766 926, Jan. 30, 1957. Through BCIRA 37: 724 (1957). (2342)

A helical spring is encased within a sheath made by lacing a wire around adjacent coils. One embodiment is illustrated, with and without a mandrel inside.

PIGMENT COMPOSITION. Rohm & Haas Co. BP 786 805, Nov. 27, 1957. Through BCIRA 38: 29 (1958). (2343)

Pigment for dyeing or printing is intimately mixed with a binder comprising (1) a low-molecular product of the reaction of formaldehyde with urea, a triazine or a biguanide, and (2) an insoluble emulsion copolymer of n-butyl acrylate and methacrylic acid.

DYEING CELLULOSIC MATERIALS WITH VAT DYESTUFFS. R. W. Speke and W. J. Marshall (to Imp. Chem. Inds. Ltd). BP 787 343, Dec. 4, 1957. Through BCIRA 38: 28 (1958). (2344)

The fabric is padded with a dispersion of the oxidized form of the dye, which is then reduced in the presence of anthraquinone-2-sulfonic acid by means of an alkaline solution of hydrosulfite, and finally re-oxidized.

DYEING CELLULOSE ACETATE FIBERS. G. D. Sutton (to T. E. Marchington & Co.). BP 787 393, Dec. 4, 1957. Through BCIRA 38: 28 (1958). (2345)

Hydrophobic fibers of the acetone-soluble type and the higher cellulose acetates are padded with a dye liquor, dried and heated at 170-210° C for 3-15 sec.

PRESSURE DYEING MACHINES. F. Leach (to F. Smith & Co. (Whitworth) Ltd). BP 787 081, Dec. 4, 1957. Through BCIRA 38: 28 (1958). (2346)

Pressure dyeing machine is fitted with a sampling chamber through which dye liquor is circulated and in which cloth samples are intermittently pressed together and released to simulate conditions in the actual pressure vessel. The compression is effected from underneath the samples by means of a plate which is raised and lowered by a solenoid.

DYEING NATURAL AND SYNTHETIC POLYAMIDE FIBERS. Badische Anilin & Soda Fabrik AG. BP 787 378, Dec. 4, 1957. Through BCIRA 38: 28 (1958). (2347)

Use of finely dispersed chromium complexes of azo or azomethine dyes at pH 1-4 and a temperature above 90° C, e.g. the chromium complex of a dye made by diazotizing 2-methoxy-5-methylaniline and coupling with p-cresol, the methoxy group being hydrolyzed in the chroming operation.

MECHANICAL PROCESSES D 3

PRODUCTION OF RELIEF EFFECTS ON POLYESTER FABRICS. C. J. Whitelegg, F. L. Barrett, J. A. Johnston, and A. Rothwell (to Bleachers' Assoc. Ltd). BP 765 096, Jan. 2, 1957. Through BCIRA 37: 725 (1957). (2348)

Ornamental shrunk effects are obtained on Terylene fabrics and the like by printing on them a paste containing a swelling agent (e.g. phenol) and then applying heat.

SHRINKING TRICOT FABRICS. I. Olsson (Sweden). BP 766 513, Jan. 23, 1957. Through BCIRA 37: 727 (1957). (2349)

The fabric runs between pairs of rollers of diminishing surface speed through a steaming chamber. The fabric is guided by stationary stays (e.g. wires under spring tension) that lie in circumferential grooves in the rollers. The first rollers are also grooved longitudinally to assist in feeding the fabric.

CALENDERING MACHINES. G. I. Fredholm (to Verkstads Calor AB). BP 766 570, Jan. 23, 1957. Through BCIRA 37: 727 (1957). (2350)

Machine with a heatable chest or bed forming the support for the calender roller which is a perforated casing having a weighted core (e.g. of concrete) and means at one end for exerting suction so as to remove moisture from the roller cover.

DRIVING MECHANISM FOR NAPPING MACHINE. J. F. Casajoana (Spain). BP 785 512, Oct. 30, 1957. Through BCIRA 37: 817 (1957). (2351)

Planetary mechanism is fitted between a central toothed wheel, loosely mounted on a shaft, and the gear wheels of the napping rollers. The planet gears engage the latter gear wheels and are rigidly connected to the central shaft. The central wheel is driven by a separate member so that the speed of the napping rollers may be varied.

DECATING APPARATUS. G. Sperotto (Italy). BP 786 833, Nov. 27, 1957. Through BCIRA 38: 29 (1958). (2352)

The perforated cylinders of a decating range are fed with steam at different temperatures and in different amounts and they are enclosed in a chamber connected to an exhaust system. After leaving the cylinders the cloth passes over a perforated conditioning drum the interior of which is also connected to an exhaust.

REDUCING THE PILLING TENDENCY OF A FABRIC. E. I. du Pont de Nemours & Co. BP 786 868, Nov. 27, 1957. Through BCIRA 38: 29 (1958). (2353)

Fabrics containing fiber of the Terylene type are gently brushed by a rapidly rotating brush providing heel to toe contact between the bristles and the fabric and then run through an over-feed pin tenter. The fibers are flattened at the brushed yarn crowns and locked within the body of the fabric by the subsequent compression due to shrinking.

NAPPING MACHINE STOP MOTION. N. Pilkington, J. M. D. Tomlinson, and R. R. Clegg (to Tomlinsons (Rochdale) Ltd). BP 787 028, Nov. 27, 1957. Through BCIRA 38: 29 (1958). (2354)

The invention relates to microswitch devices for giving an audible or visible signal when the card-wire rollers of a single- or double-acting napping machine are running at zero raising action. The devices are operated from the chains that drive the rollers and circuits are closed when no action occurs.

DRAFTING APPARATUS. J. Noguera (to Casablancas High Draft Co. Ltd). BP 787 086, Dec. 4, 1957. Through BCIRA 38: 16 (1958). (2355)

Casablancas units are fitted with extra long aprons that pass around the upper and lower rollers of two pairs of supporting rollers so that the apparatus will accommodate both long and short fiber.

APPARATUS FOR ORNAMENTATION OF SHEET MATERIAL. J. G. Evans, G. Landells, W. J. Moorhouse, and J. R. W. Perfect (to Bradford Dyers' Assoc. Ltd and Bleachers' Assoc. Ltd). USP 2 825 117, Mar. 4, 1958. (2356)

Decorative configurations in localized areas, such as seersucker effects, ribs, projections, ripples, indentations, etc., are produced by compressively shrinking adjoining regions while permitting the material in localized regions to move freely.

MANGLING MACHINES. H. L. Byrd (to Sir James Farmer Norton & Co. Ltd). USP 2 825 217, Mar. 4, 1958. (2357)

Means for applying pressure to mangle bowls to give more uniform distribution of pressure along the bowls is described.

OPEN-WIDTH FABRIC PILING APPARATUS. M. H. Rowe (to E. I. du Pont de Nemours & Co.). USP 2 825 556, Mar. 4, 1958. (2358)

FABRIC STRETCHER. F. R. Piper and J. M. Gardner (to West Point Mfg. Co.). USP 2 825 997, Mar. 11, 1958. (2359)

For stretching shrunken towels back to within a tolerance of their original length.

TUBULAR KNIT FABRIC SPREADING AND PROPELLING EQUIPMENT. E. S. Beard. USP 2 826 802, Mar. 18, 1958. (2360)

FABRIC ACCUMULATING APPARATUS. J. D. Robertson (to Mount Hope Machy. Co.). USP 2 828 122, Mar. 25, 1958. (2361)

Scray structure with means for engaging the delivered cloth at spaced intervals across its width in order to prevent objectionable wrinkling and creasing.

FABRIC FEED ROLL. D. V. Guillemette (to Mount Hope Machy. Co.). USP 2 828 123, Mar. 25, 1958. (2362)

Feed roll arrangement for fabric accumulating apparatus which prevents lapping of the fabric and eliminates static effects.

WINDER FOR WEB MATERIALS. R. W. Phelps (to Black-Clawson Co.). USP 2 828 926, Apr. 1, 1958. (2363)

Continuous winder capable of winding multiple successive rolls and of changing from a full roll to a new core without slackening speed.

APPARATUS FOR MOUNTING FABRIC EDGE ON NEEDLE CHAINS. H. Vits (to Vits-Elektro GmbH). USP 2 831 234, Apr. 22, 1958. (2364)

TEXTILE STRAPPING MACHINE. D. E. Black, W. E. Collins, J. N. Wognum, and J. E. Ott (to Acme Steel Co.). USP 2 831 422, Apr. 22, 1958. (2365)

Machine for compressing bundles of textiles and then encircling them with metal straps to facilitate handling during shipment.

PILE FABRIC WINDING FRAME. A. Hart. USP 2 831 641, Apr. 22, 1958. (2366)

DRYING D 4

AUTOMATICALLY ADJUSTABLE HOT AIR NOZZLES FOR DRYING CHAMBERS. Gebrüder Sucker GmbH. BP 758 911, Oct. 10, 1956. Through BCIRA 37: 563 (1957). (2367)

To make it easy to thread the fabric through the gap and to lessen risk of damage if the rate of travel is much reduced, one set of the nozzles between which the fabric travels is automatically adjustable towards and away from the other by mechanical, electrical, or hydraulic means in accordance with the rate of travel or the temperature. If desired, the adjustment may also effect appropriate adjustment of the openings in the chamber.

FABRIC GUIDE FOR TENTERING AND DRYING MACHINES. H. Krantz, W. Krantz, and A. Simons. BP 759 973, Oct. 24, 1956. Through BCIRA 37: 563 (1957). (2368)

The invention relates to a tenter of the kind in which the guide rails and their support heads in the entry field swing laterally in response to a feeler that touches the oncoming selvages, and support plates at the head of the inlet cheeks guide the fabric on its way to the needles or hooks of the conveyor chain. To avoid the tendency of the support plates to move together when the inlet cheeks move to compensate for a narrowing of the fabric, it is now proposed to mount them independently.

DRYING OF SIZED WARPS. Gebrüder Sucker GmbH. BP 760 188, Oct. 31, 1956. Through BCIRA 37: 546 (1957). (2369)

In the apparatus described treatment is effected in two stages: in the first a stream of gas moves parallel with the web or thread and in the second stage across it.

APPARATUS FOR DRYING PAPER, FABRIC, ETC. A. C. Wilson. BP 762 676, Dec. 5, 1956. Through BCIRA 37: 641 (1957). (2370)

Hot-air drying apparatus in which the passage or gallery expands from the point of entry in such a way that the static pressure in the passage is equal to the ambient atmospheric pressure.

ROTARY SCREEN DRYER. Fleissner & Sohn Maschinenfabrik. BP 764 266, Dec. 19, 1956. Through BCIRA 37: 688 (1957). (2371)

Rotary screen fiber dryer has a suction fan within a casing, so arranged that, in operation, the drying air is circulated by the fan radially through two outlets in the casing. There may be a series of screens arranged in pairs combined in tandem to form a unit.

SQUEEZING ROLLERS. H. E. Wood (to Petrie & McNaught Ltd). BP 766 901, Jan. 30, 1957. Through BCIRA 37: 727 (1957). (2372)

The upper roller of a mangle is weighted by a beam (or beams) suspended from the bearings and loaded at the mid-point by means of a lever the movable end of which is loaded by a spring or piston.

CLOTH DRYING MACHINES. W. H. Copley (to Sir James Farmer Norton & Co. Ltd). BP 779 093, July 17, 1957. Through BCIRA 37: 522 (1957). (2373)

Hot air nozzles are located in a casing around each cylinder.

DRYING MACHINE DRUMS. W. W. Spooner. BP 783 442, Sept. 25, 1957. Through BCIRA 37: 771 (1957). (2374)

In heating the surface of a drum of the type used in drying paper or fabrics, the heating fluid (e.g. hot air) is directed at the inner surface from a set of nozzles mounted in a casing with a curved face matching the curvature of the drum. The drum rests on two horizontal driving rollers.

DRYING TEXTILE FIBERS. G. S. Helliwell (to Samuel Pegg & Son Ltd). BP 781 006, Aug. 14, 1957. Through BCIRA 37: 601 (1957). (2375)

Loose stock, hanks, or packages are disposed in a closed circuit through which heated air is circulated at low pressure; the air is cooled before returning to the heating stage and the condensed moisture drawn off.

PIN BARS FOR TENTERING MACHINES. G. Mohring (to Famatex GmbH). BP 785 484, Oct. 30, 1957. Through BCIRA 37: 818 (1957). (2376)

The cooling effect of metallic pins in contact with metallic bars on tenter chains is a source of uneven results when they are used for conveying fabric in open width through a treatment at high temperature, e.g. creaseproofing. It is proposed to mount the pins in thermally-insulating plugs which are secured in bore holes in the bars.

CLEANING TENTERING AND DRYING MACHINES. G. Mohring (to Famatex GmbH). BP 785 929, Nov. 6, 1957. Through BCIRA 37: 818 (1957). (2377)

In a drying machine of the type in which hot air is blown at the fabric through nozzles arranged in long boxes across the path of the fabric, a suction device is fitted to the air filters for the purpose of cleaning them from time to time. The boxes are made with sloping ends to provide space for the fans, heaters, and filters.

LINT COTTON DRIER. A. L. Smith (to Continental Gin Co.). USP 2 820 306, Jan. 21, 1958. (2378)

Drying machine in which hot air is passed in a direction opposite to that of the cotton flow while the cotton is tumbled and agitated in order to expose it to the action of the hot air.

DEVICE FOR THE CONTINUOUS HEAT SETTING OF SYNTHETIC YARNS. A. Kunzle (to Heberlein Patent Corp.). USP 2 823 292, Feb. 11, 1958. (2379)

APPARATUS FOR PRODUCING CURLED YARN. L. Vandamme and L. Rouyer (to Moulinage et Retorderie de Chavanoz). USP 2 823 513 and 2 823 514, Feb. 18, 1958. (2380)

False twist is set in thermoplastic yarn by subjecting the yarn to heating by a high frequency electric field or a bank of lights or burners emitting infrared rays.

TESTING AND MEASUREMENT E

FIBERS E 1

MEASURING THE STAPLE LENGTH OF FIBERS. E. Lord (to Brit. Cotton Ind. Research Assoc.). BP 781 453, Aug. 21, 1957. Through BCIRA 37: 610 (1957). (2381)

The modal length of a sample layer of fibers is determined photoelectrically.

METHOD AND APPARATUS FOR GRADING FIBERS. R. B. Lawrance, J. R. Roehrig, and S. W. Bridges (to Nat. Research Corp.). USP 2 824 486, 2 824 487, and 2 824 488, Feb. 25, 1958. (2382)

Determination of the average diameter, diameter distribution, and percentage of different types of fibers contained in a mixture by optically scanning groups of short (less than 1,000 microns) sectioned fibers which have been aligned in a parallel manner in the focal plane of an optical scanning system.

YARNS E 2

APPARATUS FOR TESTING YARN WEAR RESISTANCE. F. Balogh and K. Ramaszeder (to Licencia Találmányokat Értékesitö Vállalat). BP 759 091, Oct. 10, 1956. Through BCIRA 37: 566 (1957). (2383)

A piece of the yarn, of predetermined length, is tensioned by a constant force, rubbed by a traversed wearing tool over a predetermined length and at a predetermined angle of rope friction, the yarn being rotated at a uniform speed to change the surface, and the period that elapses before rupture occurs is registered.

DETECTING VARIATIONS IN YARN CROSS-SECTION. A. Abbott and E. B. Johnson (to Brit. Celanese Ltd). BP 760 755, Nov. 7, 1956. Through BCIRA 37: 566 (1957). (2384)

The yarn is made to travel along the optical axis of a lens, through the real image of a source of light directed on the lens, and the light is then passed through a second lens, coaxial with the first, and the second real image so created is concentrated on a photoelectric cell. Variations in cross-section of the yarn are thus translated into variations in galvanometer readings.

DEVICE FOR MEASURING THE FINENESS OF A RUNNING THREAD. Farbenfabriken Bayer AG. BP 762 515, Nov. 28, 1956. Through BCIRA 37: 647 (1957). (2385)

The method depends on the measurement of the absorption of x-rays by the running thread.

APPARATUS FOR TESTING THE TENSION OF RUNNING YARN. R. D. Wright and E. J. R. Hewitt (to Brit. Nylon Spinners Ltd). BP 766 579, Jan. 23, 1957. Through BCIRA 37: 731 (1957). (2386)

The yarn is run over, round or through a guide that tends to move with variations in tension but is held in place by a magnetic field energized by an electric current under the control of a displacement detector working in conjunction with the guide. Variations in the current are measured or recorded and afford the means for registering the tension variations.

DEVICE FOR MEASURING YARN TENSION. M. B. Catford (to Brit. Jute Trade Research Assoc.). BP 781 567, Aug. 21, 1957. Through BCIRA 37: 610 (1957). (2387)

The displacement of the feeler is kept small and the tension is recorded by a capacitance method.

AUTOMATICALLY CHANGING A THREAD UNWOUND FROM A BOBBIN BY A THREAD TESTING MACHINE TO A THREAD OF ANOTHER BOBBIN. Zellweger AG. BP 777 765, June 26, 1957. Through BCIRA 37: 461 (1957). (2388)

AUTOMATIC WINDING TESTER. A. Marti (to Inst. Textile de France). BP 783 830, Oct. 2, 1957. Through BCIRA 37: 778 (1957). (2389)

Winding tester for yarn with means for indicating and/or recording variations in unit mass, diameter, or extensibility.

INSTRUMENT FOR MEASURING YARN SPEED. P. H. Briggs and K. J. Butler (to Brit. Rayon Research Assoc. and Dukes & Briggs Eng. Co. Ltd). BP 784 236, Oct. 9, 1957. Through BCIRA 37: 779 (1957). (2390)

Portable instrument for measuring the speed of a running yarn employs (1) a source of light that can be flashed at any of a range of known frequencies and (2) an apertured member that can be rotated by the yarn in front of the light. The frequency at which the aperture is steadily illuminated is a measure of the speed of the yarn. The lamp and apertured member (e.g. a grooved wheel) are mounted in a hand device resembling a torch and the electronic control circuit for modifying the frequency is arranged in a separate box that can be slung round the observer's neck. The apparatus may be used also as a conventional stroboscope and a dial to the box may be graduated to read directly in feet or rpm or both.

IMPERFECTION COUNTER. E. J. Bernet (to Inst. of Textile Technol.). USP 2 739 239, Mar. 20, 1956. (2391)

An instrument which detects yarn imperfections (neps, etc.) and transforms them into electrical signals so that selected imperfections may be counted.

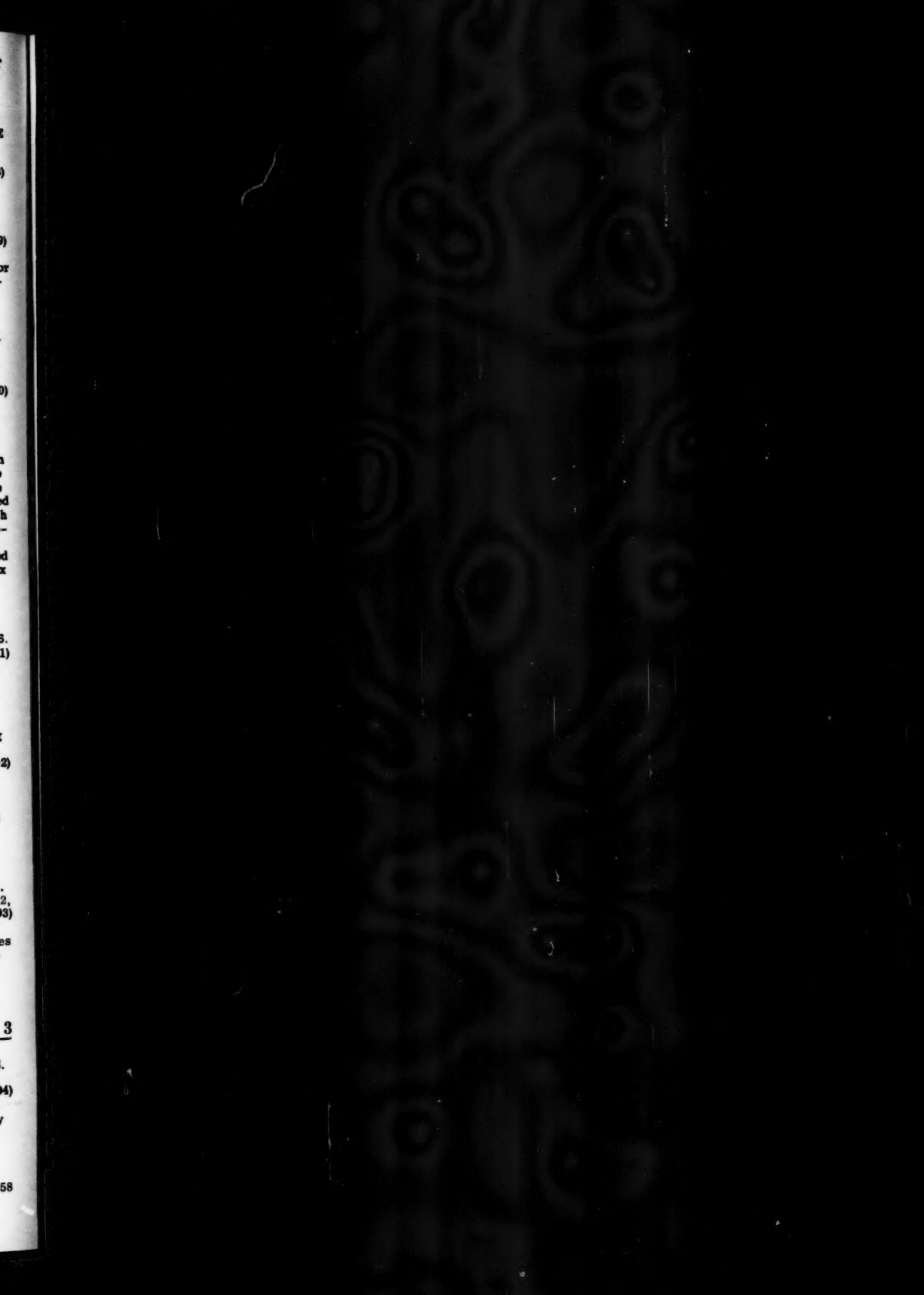
LAP ROLL ANALYZER. W. C. Anderson (to Deering Milliken Research Trust). USP 2 820 297, Jan. 21, 1958. (2392)

Apparatus for electrically detecting and measuring variations in thickness in a traveling picker lap. The output signal varies with the average thickness across the width of the lap.

APPARATUS FOR TESTING YARN WEAVABILITY. M. Levin, J. Friedlander, and S. Horowitz (to Inst. for Fibres & Forest Prods., Israel). USP 2 820 362, Jan. 21, 1958. (2393)

Apparatus designed to subject yarn to complex stresses similar to those occurring in the loom: tension in the direction of the warp and alternating bending in the transverse direction.

FABRICS E 3

HOSIERY INSPECTION AND HANDLING APPARATUS. T. H. DeSpain (to Southern Textile Machy. Co.). USP 2 818 205, Dec. 31, 1957. (2394)

Device for automatically stripping and turning hosiery following inspection.